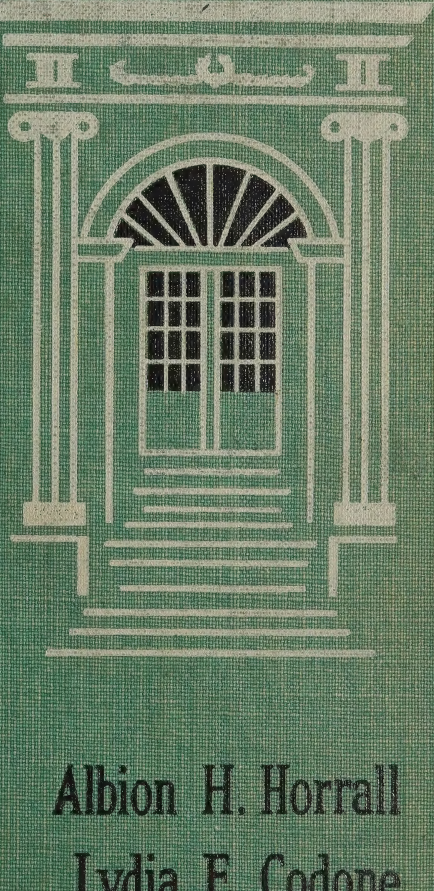
LET'S GO TO SCHOOL



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LET'S GO TO SCHOOL

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LET'S GO TO SCHOOL

Integrative Experiences in a Public Elementary School

By ALBION H. HORRALL
Assistant Superintendent of Schools
San Jose, California

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PREFACE

LET'S GO TO SCHOOL is an attempt to show what can be accomplished in an elementary school that is not "highly privileged," in the ordinary use of the term. The children come from average or below-average homes, financially speaking; their intelligence ratings are not high. The teachers have had ordinary preparation, so far as their records in higher institutions are concerned. The building is old and rambling; it was designed for elementary instruction sixty years ago.

Perhaps the one way in which Lincoln School could be classed as "highly privileged" is the enthusiastic interest of the teachers in their children. They are constantly aware of the needs and interests of the children and are always attempting to find answers for the ever-increasing number of problems through reading, experimenting, discussing and evaluating their work.

The units, described in detail in Part II, are not given as models to be followed slavishly. They are merely examples of what can be accomplished when children and teacher together find some common interest that has sufficient breadth and depth to hold their attention for a considerable time.

If this volume can in some small way assist teachers, principals, supervisors or administrators in adjusting their point of view toward the values of a modern school program, then the authors will feel their efforts have been worth while.

The authors believe that such familiar youthful expressions as "let's play hookey," "let's go fishin'," and even "let's go to the movies" are rapidly being replaced by "let's go to school" in the conversations of school children who are privileged to attend modern, child-centered schools. Hence, the title.

Since the authors are all workers in the San Jose School System, they recognize that this book could not have been made possible were it not for the farsighted, progressive attitude of their superintendent, Walter L. Bachrodt, who constantly encourages and urges his staff to place the needs and interests of children first. Thanks and appreciation also go to Dr. Paul R. Hanna, Associate Professor of Education at Stanford University, for his encouragement and helpful criticism of the manuscript.

To our fellow workers at Lincoln, who are always cooperative and helpful, we express our thanks for their valuable contributions to this work. They include Geneva Bronson, Josephine McCabe, Anna Pohlman, Leah Rhodes, Mabel Willson, Anita Russell, Lydia Codone and Mary Carmichael. Especially valuable have been the statements on The Theater and Primitive Life contributed by Miss Josephine McCabe and Mrs. Anna Pohlman.

The authors wish to take this opportunity of thanking those publishers who so kindly granted permission to quote from their publications. Recognition is also given as the quotations appear throughout the book.

THE AUTHORS.

SAN JOSE, CALIFORNIA,
May, 1938.

EDITOR'S INTRODUCTION

IT APPEARS to be a devoutly held belief in certain so-called "essentialist" circles that the progressive education movement is exhibited only in the starry-eyed theories of radical professors of education and in the exotic practice of a few experimental schools. Those who set themselves realistically to observe contemporary developments in education without allowing themselves to be blinded by prejudices which they may have exhibited faithfully through many years in academic lecture halls will recognize the pathetic simplicity of this belief. Once it may have been true that activity programs of real power and direct purpose could not be set up and maintained successfully under the usual conditions and limitations of public education. Certainly it is not true today. In many places and in many types of public educational institutions, the modern progressive program has become the rule rather than the exception.

Those who still adhere to the belief that the public school must necessarily follow a traditional essentialist pattern defend their position with familiar arguments. They point to the fact that many experimental schools work with children of superior intellectual abilities in neighborhoods of high cultural level. They suggest that unusual facilities and expensive equipment are needed for the programs of the experimental schools. They describe the average and the underprivileged children with whom the public school has to deal. They indicate grimly the large classes and the meager equipment imposed by the scanty budgets of some public schools. They shake their heads sadly over what seems to them to be the fatally limited imagination and skill of the average public-school teacher.

The present book stands squarely in the way of adherence to this attitude. In clear, direct, simple fashion, illumined by a wealth of detailed illustration, it shows how a modern program can be organized and operated successfully under the usual handicaps of a public-school system. It describes the planning and development of such a program for average and underprivileged children in the elementary school of an American city of moderate size. It explains how the program is carried forward without expensive facilities or unusual advantages in size of classes. It illustrates once more the enduring educational principle that good schools are made not by books, bricks and gadgets but by the intelligence, imagination and courage of its teachers.

This book employs a unique and effective method of presentation. By photographs, narratives and samples of children's original work, a large number of actual classroom situations are given to the reader with a detail and a clarity approaching those secured from direct observation. With three-dimensional effect, with depth of illustration and breadth of examples, this work goes far above and beyond the flat and formalized efforts of the traditional textbook in principles of elementary education. It is a scholarly treatise in story form and a story which treats of basic facts and principles.

The authors of this book are on the firing line of modern elementary school practice. They are not issue-balancing theorists trying to decide whether it is professionally logical for them to support or oppose the campaign for the modern school. They are not gold-plated generals discussing principles of strategy in bombproof headquarters. They are in the fight, they are modern educators in action, and they tell their story in the frank and engaging manner of practical workers whose theories are never more complex and extensive than the facts require.

HAROLD BENJAMIN.

UNIVERSITY OF COLORADO,
May, 1938.

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PART ONE

A Modern Elementary School

1 · Some Interesting Situations

EDWARD was telling the story of Buffalo Bill to his ten- and eleven-year-old classmates. As he finished, Mary asked, "How did Buffalo Bill get his name?"

Ralph stated that Buffalo Bill received his name because of the large number of buffaloes he was able to kill in one day. Charles thought the name was earned because Cody would not permit the white people to kill buffaloes; he wanted to save them for the Indians. James threw a bombshell into the group by announcing he had read in Ripley's "Believe It or Not" that Buffalo Bill had "never killed a buffalo in his life."

This statement was immediately challenged by Ralph, who produced a copy of ON THE TRAILS OF YESTERDAY,* and read the following paragraph.

> The name Buffalo Bill came to him in 1867, when he entered into a contract with the Kansas Pacific Railroad to furnish fresh meat for the laborers. Great buffalo herds roamed the western plains. Their meat made fine juicy cuts. Buffalo Bill, it is reported, killed over 4,800 buffaloes that year, the highest record being 69 in one day.

Other members of the class who had been reading articles from various books concerning the "Westward Movement" said they had found reference to Colonel Cody's ability as a marksman. Jeanette decided to seek assistance from the dictionary. She found that a buffalo is "in America, the bison, a wild ox with a great shaggy head and strong front legs."†

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* Cloud, Roy W., ON THE TRAILS OF YESTERDAY, Harr Wagner Publishing Co., San Francisco, 1933.

† Thorndike, Edward L., THE THORNDIKE-CENTURY JUNIOR DICTIONARY, Scott, Foresman & Company, Chicago, 1935.

From the definition, the group concluded that Ripley had resorted to a "play upon words" and that Cody had, in all probability, obtained his nickname through his ability to kill American buffaloes.

The incident just related is typical of the types of situations that regularly arise in classrooms where a modern program of education is being developed. This and the following six illustrations are taken from actual observations in one public elementary school.

A member of the Junior Chamber of Commerce brought 20 free football tickets to school for boys of grades four, five and six. Although there are more than 80 boys in those grades, 20 could not be found who would attend the game. It was not that the boys were uninterested in football, for they live in the home town of the state-college team, which had held the championship in their conference for two years. The difficulty was that the boys who attended the game were to be excused one hour before the regular dismissal. This was Friday afternoon, and the last hour of the school week was "club period." The boys refused to give up their club period for a football game.

Boys and girls were at school Friday (a holiday, the day following Thanksgiving) painting boxes and shelves, carrying desks and pictures. The teacher had announced to her class that she was moving into a new room during vacation. The new room was larger and would be more satisfactory in every way. The children asked to come and assist the teacher and janitor with the moving.

Cyril, a six-year-old who had been in school less than six weeks, was standing before a group of ten-, eleven- and twelve-year-old boys holding a homing pigeon. The stenographer caught the following conversation.*

CYRIL. This is a racing pigeon. My dad raced some pigeons Sunday. They had little counter bands on their legs. The bands tell you what kinds of pigeons they are. These pigeons came in at six o'clock when it was dark. When the first one came in, my dad took the little band off its leg.

JOHN. Where did your dad race them?

---

* The exact words of the children are given.

CYRIL. I think he raced them to Salinas or King City.

GEORGE. Did he take them there?

CYRIL. No, the train took them.

GEORGE. Who let them out of the box?

CYRIL. A man on the train. Then they flew home and my dad trapped them.

WALTER. How does he trap them?

CYRIL. As they fly home they go through a little trap. They step on the trap and a bell rings. That tells my dad what time it is when they come in.

RALPH. Are all the pigeons the same color?

CYRIL. Gosh, no. They're not all the same color. Some blue-checked, some red-checked, some blue-gray. This one has sort of a white neck, blue around his wings.

RALPH. Do you have any dark ones?

CYRIL. We have one. He's black. My dad named him Amos 'cause he's black.

CHARLES. Do pigeons carry messages?

CYRIL. Yes. That's the way they did in the war. When the soldiers turned them loose, somebody tried to shoot them down if they could. One day my dad raced a pigeon from San Francisco. He was flying high so the other birds couldn't bother him. He saw some oil down on the ground. I guess he thought it was water and he wanted a drink. He flew down and got covered with oil.

THOMAS. When do you feed the pigeons?

CYRIL. We feed them at noon and at nighttime. The pigeons on this side of the cage (a gesture with the right hand), they clean the box. They fly out and get exercise. The others don't fly out, they are the breeders.

BOBBY. Will all pigeons come home if you turn them loose?

CYRIL. No, only homing pigeons. The others are "commons." They don't have bands on their legs.

After a few more questions the children went to the playground where Cyril released his pigeon. The bird circled once, then darted for its home.

In a classroom of 42 children, a work period was in progress. Between 30 and 35 pupils were busily working on various types of activities, but the teacher was not in sight. The observer was not noticed as he entered, for all were busily engaged in their work. Three girls were on the floor in the center of the room pasting long sheets of paper together, which were to be used as scenery for a play the group was soon to give in the school assembly. Four boys were making Viking shields. Several girls were sewing costumes in one corner of the room. Boys were designing and cutting wings and horns for their helmets. Six children were making a frieze on strips of wrapping paper that had been fastened to the wall about shoulder height.

Upon inquiry as to the whereabouts of the teacher and the other children, they were located in the auditorium. The teacher was conversing with a group of five who had just finished rehearsing the play that had been written by the class. Four boys were in the adjoining hall painting a Viking boat.

An arithmetic drill lesson was observed in a sixth grade. At the beginning of the period all participated in a rapid oral drill on fundamentals, the teacher in charge of the situation at all times. At the end of 10 minutes, each child took up his particular assignment and began to work problems in his notebook. There was a list of assignments on the board. As each child completed an assignment, he checked his answers in the book and corrected his own mistakes, solving a second time problems that were incorrect.

When he had completed all assignments for the week, he was ready for a test and might spend his arithmetic time in working additional problems or in working on other responsibilities which he had not completed or in which he had special interest.

The teacher prepared a check test each week containing problems similar to those covered by the assignments for the week. All who passed the tests satisfactorily at the end of the week were ready to go on to the next week's assignments. Those who made unsatisfactory

● FIG. 1.—*Viking experiences become real when ten-year-olds build boats, make costumes and write plays.*

grades were required to spend more time on the types of problems they had missed.

A boy or girl who always completed his assignments each week, when he checked his own work, but failed consistently in the weekly tests, might have his answer sheets sealed temporarily and be required to have each assignment checked by the teacher or by some designated pupil before he was permitted to undertake the next assignment.

All members of the class were assumed to be dependable and responsible citizens until they proved themselves otherwise. As soon as they again showed that they were willing to "play the game" according to the rules, they were given an opportunity to do so.

A Justice Court was observed in one room. Those who have not been good citizens during the day are given "tickets" by the "policemen." Offenders are given an opportunity to plead. If guilty, they are sentenced immediately by the "judge." Those who plead "not guilty" may give testimony and listen to accusations made by the "policemen" or other members of the group. After all evidence is in, the offender is sent from the room while the members of the class vote on his guilt. These boys and girls are usually fair in their decisions. When the penalties appear to be too harsh, or an offender is about to be freed because certain evidence has been overlooked, then and only then does the teacher interfere.

In this large class there are many more boys than girls, but the discipline is controlled satisfactorily by the children.

This is not a private school. It is not a public school in a highly privileged district. It is not a teachers college controlled demonstration school. It is just a cosmopolitan public school of eight rooms with an average enrollment of 36 pupils per teacher.

2 · The School

IN ORDER that the reader may have a better understanding of the background of the school in which the incidents described in the first chapter occurred, an attempt will be made at this time to "set the stage."

The Lincoln Elementary School is situated two blocks from the business section of San Jose, Calif. One block to the east is the main arterial highway between San Francisco and Los Angeles. A block to the north is encountered the arterial between San Jose and the Pacific Coast towns and resorts. Directly in front of the school is the street used as a truck route for north and south traffic. The building is three blocks from the City Hall and about five blocks from the business center of the city.

The oldest section of this two-story wooden building was erected about 1875. To the original structure were added, in 1907, twelve classrooms and an assembly room. Then, for a short period, the building housed the San Jose High School as well as the first eight grades. In 1924 grades seven and eight were removed to a junior high school.

CHILDREN ATTENDING LINCOLN SCHOOL

Recently, because of its close proximity to the business section of the city, the enrollment of the school has steadily declined. During the past six years the teaching staff has been reduced from twelve to eight. Business establishments are rapidly replacing dwellings. As a residential district the section of the city served by Lincoln School is doomed. No new houses are being erected in the district. Many old houses are being removed to make way for business, but there remains a large number of well-built, comfortable, modern homes.

The district is rather low in the ratio of elementary school children to the number of houses in the district because a high percentage of elderly persons live in the community. These persons own their homes and have lived in the district long enough to have reared their families. Because of home ownership and the nearness to the business center, they continue to remain in the community.

There are very few vacant lots. As rapidly as old houses are dismantled, garages, service stations and other similar businesses occupy the space. Many small, old houses with few conveniences may be had at a low rental.

The following table gives a clear idea of the racial background of most of the children enrolled during the school year 1935–1936. Approximately forty children (and their parents) are not included in the tabulation.

NATIVITY OF CHILDREN AND PARENTS OF LINCOLN SCHOOL

State or Country	Children	Parents
California	193	34
United States (other than California)	34	288
Italy		55
Mexico	3	38
Greece		15
Spain		7
Russia		3
Denmark		3
Jugoslavia		6
Belgium		2
China		2
Hawaii		2
Canada	3	2
Porto Rico		2
Philippines	1	2
Norway		1
Lithuania		1
Czechoslovakia		1
Central America		1
Sweden		1
	234	466

It should be noted that the above table indicates only two generations. While but seven children were born outside of the United States, more than 30 per cent of the parents are foreign-born. No doubt a study of the birthplaces of grandparents would reveal a much higher percentage of foreign-born.

The lack of permanency of enrollment in the school is not a serious problem. Less than 10 per cent of the children transferred from other schools during one year and the pupils leaving the school about equaled those entering.

The school nurse's records show that 38 children, or 13.3 per cent, were at least 10 per cent underweight at the beginning of the school year 1935–1936. Her records also reveal the fact that the parents of 112 children, or 42 per cent of the total enrollment, were "on relief."

In order to obtain one objective measurement of the educability of Lincoln School children, the National Intelligence Test was given to all above the third grade. The results of this test are shown in the following table.

NATIONAL INTELLIGENCE TEST RESULTS

	I.Q. below 70	70–89	90–110	111–120	121–140
Room A	3	17	17	2	1
B	1	10	19	9	4
C	1	15	17	3	
D		5	16	5	7

Although the foregoing table is a record of the four oldest groups of the school only, the groups tested were typical and the probable range in I.Q.'s for the first four rooms would doubtless be similar. Briefly the table indicates that Room A is definitely below normal in intelligence, that Room B is about normal, Room C is below normal and Room D is above normal in intelligence.

The children range in chronological age from 5 years 9 months to 13 years 2 months and are working on materials designed for levels from low first through high sixth grades.

ADMINISTRATIVE AND TEACHING PERSONNEL

Because of the decrease in enrollment and the consequent abandonment of all but eight classrooms coupled with the close proximity to the geographical as well as the business center of the city, the Lincoln School building has been partially occupied by the city school administration. The offices of the city superintendent, the assistant superintendent, city supervisors of special subjects and other employees of the school department are located in this building.

The assistant superintendent is directly in charge of elementary instruction for the city schools. Since his office is located in the Lincoln School, he also assumes the responsibilities of the principalship of this school. This arrangement does not provide a full-time principal for the school; in fact, the principal is *in absentia* a part of every school day. It does, however, provide the school with a leadership of wider training and experience than might be available to the ordinary eight-teacher school.

The eight teachers in the school are unusually alert to modern methods of instruction. None has fewer than 2 years of normal school or teachers college training and all have attended summer sessions or have been enrolled in college or university extension courses within the past 5 years. Six of these teachers have served on recent course of study committees, representing their building and the teachers of their particular grade for the entire city. Their permanent record cards show that one has had 6 years' teaching experience, three have taught less than 10 years and two more than 20 years.

For the past several years the teachers and children of Lincoln School have been "activity-minded" and modern procedures have been used in ever-increasing degree. However, until April, 1935, the daily programs were still arranged from a subject-matter point of view and a definite period was assigned to the teaching of each subject, the teacher apportioning a certain number of minutes to each subject per week.

A NEW APPROACH

During the latter part of March and the first of April several building meetings were held in which the principal described the types of work being done in many of the more progressive schools. Most of the schools described were private institutions or public schools that cared for rather highly privileged children. The teachers were anxious to ascertain whether the newer type of instruction could be carried on successfully in a public school enrolling average or lower than average children coming from various types of homes.

After reading A TEACHER'S GUIDE TO THE ACTIVITY PROGRAM by Robert Lane and rereading some of Rugg and Schumaker's THE CHILD-CENTERED SCHOOL, Carleton Washburne's ADJUSTING THE SCHOOL TO THE CHILD, Waddell, Seeds, and White's MAJOR UNITS IN THE SOCIAL STUDIES and California Curriculum Commission's TEACHERS' GUIDE TO CHILD DEVELOPMENT, the teachers began to see the possibilities of planning their work in terms of *values* for children rather than in terms of subject matter to be covered.

One of the most worth-while volumes, from a visual standpoint, in helping the teachers to obtain a modern point of view was WILLINGLY TO SCHOOL by Claire Zyve and others. This book describes in word and picture the activities of the Fox Meadow School in Scarsdale, N. Y., one of the schools visited by the principal and described at the first March building meeting.

The teachers began to talk in terms of centers of interest and to plan their activities so that practically the entire school day revolved about or evolved from some central unit of work. It was decided at the very beginning not to make a special attempt to relate arithmetic instruction to the large unit. As arithmetic was needed in planning or construction, it was to be used, but otherwise it was to be accepted as a "Skills and Drills" subject that required a definite period each day. The amount of time devoted to arithmetic was materially reduced.

Since this was a new development for teachers and children, the units to be used for the remainder of the school year were chosen entirely by the teachers. Choices were made from units included in the areas for the different grades as listed in the city course of study. Wherever possible the teachers chose units that had some special significance for their groups. For example, Community Helpers was chosen for the second group since the fathers of three members of the group were city firemen. Interests of the children and breadth and depth of material were given prime consideration in determining these first units.

Before any units were finally selected the following criteria listed by Ingram* were thoroughly studied and discussed.

---

* Ingram, Christine P., EDUCATION OF THE SLOW-LEARNING CHILD, World Book Company, Yonkers-on-Hudson, N. Y., 1935.

Criteria of Effective Units of Work

The unit should grow out of real life situations.

The unit should be suited to the child's social, physical and mental level of development.

The unit should further both individual and group growth.

The unit should provide for the development of desirable habits and attitudes of conduct as well as for the acquisition of appropriate knowledge and skills.

The unit should be so developed that interests, skills, habits and attitudes fostered by it carry over into life outside of school.

The unit should provide for the practical use of the tool subjects.

The unit should give opportunity for many kinds of experiences.

All teachers had chosen their units, planned their procedures and arranged for the launching of their new activities 6 or 7 weeks before the close of the school term. These units, starting with the youngest group and continuing to the oldest, were The Post Office, Community Helpers, Foods, The People of Holland, Jungle People of Africa, Points of Interest in California, Spain of Today and Rubber. The units were planned with the hope that they would continue for the remainder of the school year. Plans worked fairly satisfactorily but in several rooms it became necessary to omit some construction and other creative work that was naturally developing. Two teachers completed their units before the end of the school year and had ample opportunity for review of their content as well as a satisfactory completion of all skills and drills.

As the units proceeded, evaluations were made so that the teachers could satisfy themselves that they were accomplishing the ends they had hoped to accomplish.

This brief experience with a newer type of elementary education gave them ample opportunity to think over, during the summer, the shortcomings of their experiment. When questioned, at the close of the school year, whether they would prefer to return to their former ways of working with children, they were unanimous in their statements that they hoped they would never have to return to their old methods of procedure. They had caught the significance of the "progressive movement" in education and were at last thinking in terms of what they could do for the children rather than in terms of how much subject matter was to be covered.

No attempt is made in this section to show how the various units were developed. A detailed description of a few units will be given in Part Two.

One concrete bit of evidence may be sufficient to show how one teacher's change in approach to the planning of her work developed. First is given her daily program at the beginning of the spring semester, then follows the program of the same teacher with the same children as the change was made in April.

HIGH THIRD—LOW FOURTH GRADE

9:00	Health
9:10	Reading
10:00	Physical Education
10:20	Recess
10:40	Spelling
11:05	Arithmetic
12:00	Noon
1:00	Social Science 1, 3 and 5. Art 2 and 4
1:45	Penmanship
2:00	Music
2:20	Recess
2:30	English
3:00	Citizenship
3:10	Dismissal

NEW PROGRAM

9:00	Opening, including a short health talk and inspection
9:15	Social Studies
	a. Discussion
	b. Work period followed by evaluation
9:55	Recess
10:05	Social Studies continued, with special emphasis on oral and written expression
10:55	Recess
11:05	Reading, related to the unit being developed
11:35	Physical Education
12:00	Noon
1:00	Appreciations*
	Art

---

* This period varies from day to day according to needs and interests.

	Literature
	Poetry
	Music
	Story Book Club (free reading for enjoyment)
2:00	Recess
2:10	Skills and Drills
	Arithmetic—oral group work and individual written work
	Reading—remedial—for development of speed, comprehension and vocabulary
3:00	Citizenship Club
3:10	Dismissal

The program indicates rather clearly that the teacher was really planning her daily work in terms of the needs of children rather than thinking only of subjects and time schedules.*

GENERAL OBSERVATIONS

In order to make the background complete, some general observations of the school should be made. The discipline or management has gradually developed from a most formal type to an informal one. As the bell rings indicating the opening of the morning session, the children who are still on the playground enter the school naturally, not in lines, not with a bored or disinterested manner, but happily conversing with their playmates as they go to their respective rooms. Girls are stationed at strategic points in the corridors to see that some overly enthusiastic youngster does not endanger himself or others by some bit of thoughtlessness on the stairs. Many of these girls will take their stations for days without finding it necessary to speak to anyone. Many of the children enter the building from a half to three-quarters of an hour before time for the opening session. This is permitted so long as the individual has something worth while to do.

---

* It should be noted that the morning recess period was divided into two 10-minute periods instead of one long mid-morning period.

FIG. 2.—*Shelves, tables, chairs, filing and storage cases, together with some "personal touches" by the children, make an acceptable library out of a vacated classroom.*

With the decreasing enrollment in the school, a vacant room was made available for a school library.* During the preceding year, the various groups had taken as their responsibilities the development of an attractive, efficient library room. The oldest group segregated the articles from many issues of the National Geographic Magazine, bound them in attractive, serviceable paper covers and filed them in alphabetical order for their own use as well as for the use of succeeding classes. A second group conducted a school contest in order to obtain a satisfactory bookplate to be placed in all books belonging to the Lincoln Library. Book ends, sawed from wood in shapes to represent rabbits, squirrels, camels and bears, were constructed by another group. Cushions made of oilcloth and stuffed with cotton were placed in a low drawer by another group for use by the primary children when they came to the library. Other groups made additional contributions until the library was a livable, homelike room where children were glad to assemble for reading before school, during special library periods or after school hours.

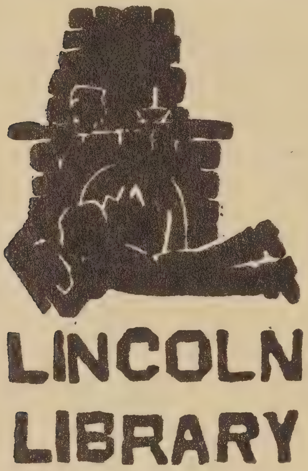

Fig. 3.—*Bookplate made by an eleven-year-old boy and used in all Lincoln Library books.*

Weekly assembly periods were a part of the regular program. Although a teacher was always in charge, the children had much to do with the programs. A large part of this 30-minute period was given to singing "for the joy of it." Children were afforded an opportunity to assist in the selection of songs. One feature of the assembly was that each week one group presented a short program for the others. These programs varied from simple dramatizations, book reviews and musical numbers to the more elaborate presentations of culminations of units of work, and short operettas. This weekly assembly proved quite an attraction to parents as well as to children. Many mothers made it a point to visit school on Thursday morning, for that was Assembly Day.

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* Horrall, A. H., DEVELOPMENT OF AN ELEMENTARY LIBRARY, American School Board Journal, Milwaukee, Wis., May, 1935.

Some attempt had been made to develop special interests and abilities. There was a school orchestra, a rhythm band, a boys' and girls' glee club, a Camp Fire group, a baseball team, a special art club and a nature club. No definite place was given to these activities on the school program. Some had their meetings during the regular school day, others met only after school hours. Both interest and ability were considered in making it possible for children to participate in these groups. The special art club had some members from another school who came regularly to participate in the activities of the group.

One of the compensations that comes from working in an old building is that the rooms are large and airy, with high ceilings. The teachers find that their rooms can easily seat 35 children and still have space for construction work. Occasionally, when scenery or large drawings are to be made, it is necessary to move out into the wide, but not too well-lighted, corridors. The rooms housing the three younger groups are fitted with tables and chairs while the other five rooms are equipped with movable desks.

The school grounds are surrounded by a high steel fence on two sides and tight board fence on the other two sides. The playground is ample in size for the enrollment and has recently been graded and surfaced with a small gravel that does not easily injure tender skin. There is but one piece of playground apparatus, a parallel bar elevated 5 feet above the ground. Playground supplies, such as kick balls, volley balls and playground bats and balls, are provided in sufficient quantity to meet the needs of the school.

With this rather detailed background, the reader should be ready to examine the philosophy and curriculum of this school. Later will be described some of the integrative influences that make each individual feel his responsibility to and his security in the entire school. Some evaluations will be made. These will be followed by detailed reports of a few units as they have developed in Lincoln School.

3 · Philosophy and Curriculum

IT MUST be recognized that a teacher's philosophy of education cannot be changed overnight. When one has been believing for many years that he has done a satisfactory piece of work if he can truthfully say at the end of the year that he has covered all assignments, it is extremely difficult to make an "about face" and say, "I am going to put *children* first." This change does not ordinarily come suddenly but is of slow growth. Fortunately, many teachers have long since accepted the modern philosophy of education but have been hampered by the petty limitations and regulations of administrators or supervisors.

Nothing has been said in the preceding chapter about the philosophy behind the desire of Lincoln teachers to change to a more modern approach to educational problems. It is only fair to state that all these teachers had for some time recognized the importance of studying the individual child. They also believed that children were more important than subject matter. They needed but to be told that restrictions as to grade standards and page assignments had been removed; then, through reading and discussion, they were stimulated to attempt some of the things they had been wanting to try for years.

It is the belief of the Lincoln teachers that their responsibility is to accept the children where they are and to take them as far as the children can go during the school year. This does not mean that teachers are constantly striving to force the members of the groups up to any preconceived standards. It does mean that teachers must study the abilities and interests of each child. They must keep before this child attainable goals. They must help him to measure himself by

● FIG. 4.—*Pupils of high sixth grade learn to do by doing.*

standards that are reasonable for him. The teachers believe in the doctrine of interest but they also believe that if the individual is to work up to his capacity, he must put forth much real effort in order to accomplish results that are worthy of him.

The Lincoln teachers believe with Gordon Melvin that the primary goal of education for both learner and teacher should be "to make human personality";* that in order to assist each child to make the personal adjustments necessary in life, the teacher must assemble all possible information concerning home life, parents, health, after-school activities, school successes and the temporary and permanent interests of each child.

The Lincoln teachers agree wholeheartedly with the Department of Education of the State of California† that the function of the elementary school is to help each child to:

1. Develop a sound body, normal mental attitudes, and controlled emotional reactions.
2. Understand social relationships and participate in them in ways conducive to the progress of society.
3. Develop his potential possibilities as completely as possible.
4. Cultivate habits of critical thinking and the ability to meet new situations.
5. Acquire command of the common knowledges and skills essential to effective living.
6. Develop appreciation of and desire to seek beauty in its many manifestations.

Further, the teachers believe that our modern elementary schools

> . . . are child-centered institutions designed to afford children the opportunity to exercise desirable social relationships, to learn by doing, to develop powers of thinking through problems, to cultivate individual interests and aptitudes. The elementary school aims to equip children with the tools of learning at the same time emphasizing those experiences in the realms of

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* Melvin, A. Gordon, THE ACTIVITY PROGRAM, Reynal & Hitchcock, New York, 1936.

† Department of Education, SUGGESTIONS FOR PUBLIC SCHOOL WEEK ACTIVITIES, Bulletin Number 2, California State Printing Office, Sacramento, Calif., January 15, 1936.

art, music, science, and literature which make life a rich, colorful, cultural adventure.

Lincoln teachers recognize that many children in their groups have slight opportunity to experience the richness and color of life aside from those experiences they meet at school. They also recognize that much valuable assistance in introducing the children to a fuller life may be had from parents who have spent a part of their lives in countries other than our own.

THE CURRICULUM

The curriculum of Lincoln School has been developed from sections of the various courses of study for elementary schools issued by the central office for all elementary schools of San Jose. These courses of study have been prepared by teacher committees representing all grades and all buildings in the city. All courses have been prepared within the past 5 years. The committees have been chairmaned by the assistant superintendent or by one of the special supervisors. Since these courses of study have been prepared as separate subject-matter courses, it has been necessary for the schools or individual teachers to devise their own means of relating one type of subject matter to another.*

The teachers of Lincoln School have taken as their core materials those that are based on science, either natural or social. Since there has not been a natural-science course developed for San Jose, most of the units have been chosen from the social-science field. It will be seen, however, by examining the lists of units used during the year that natural science has played a large part in the experiences of the children.

The San Jose course in social studies for the elementary schools defines certain areas within which each teacher is expected to remain when choosing units of work. Under each area are listed several units that have been suggested for use on the various grade levels. No group is expected to use all units in one year, but a choice may be made. If the interests of the group seem to turn in another direction than that suggested by any of the units listed in the course, the teacher is at liberty to proceed with the new unit so long as it is within her general area and does not encroach upon the field to be covered at some higher level. This seems necessary within a city where there is much transferring of children from one section to another.

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* One of the tasks the elementary schools set for themselves during the school year 1936–1937 was the development of a unified course of study.

The areas as listed in the social-studies course are as follows:

Grade	Areas
Low first	Home and School
High first	Community
Low second	Primitive Life
High second	Food, Shelter, Clothing, Occupations
Low third	Children around the World
High third	San Jose and Santa Clara Mission
Low fourth	Santa Clara County (from about 1848)
High fourth	California
Low fifth	The Americas
High fifth	United States
Low sixth	Europe
High sixth	Asia, Africa, Australia

It will be observed from the above list that the areas are almost entirely geographical, but as one studies the units suggested under each area it will be seen that much more than geography is included in the experiences outlined for the various levels.

Units for First Grade (Home, School and Community).
  The Family.
  Play (or Doll) House.
  Pets.
  Thrift.
  Indoor Garden.
  Holidays.
  Community Helpers.
  Post Office.
  Safety Club.
  Citizenship Club.
  Outdoor Garden.
  The Farm.

Units for Second Grade (Primitive Life, Food, Clothing, Shelter, Occupations).

  - Extinct Primitive People.
  - American Indians.
  - Trees and Leaves.
  - Eskimos.
  - Birds.
  - Common Wild Flowers of Santa Clara County.
  - Food.
  - Shelter.
  - Clothing.
  - Occupations.
  - Transportation.
  - Mexico.
  - Wild-animal Life—The Circus.
- Units for Low Third Grade (Children around the World).
  - Map Development.
  - Chinese.
  - Japanese.
  - Filipinos.
  - Hollanders.
  - Scandinavians.
  - Swiss.
  - Desert Peoples.
  - South Americans—Jungle People.
  - South Americans—The Argentines.
- Units for High Third Grade (San Jose and Santa Clara Mission).
  - California Indians.
  - Santa Clara Mission Life.
  - Pueblo of San Jose.
  - San Jose of the Fifties.
  - City of San Jose Today.
- Units for Low Fourth Grade (Santa Clara County).
  - The Valley of Heart's Delight.
  - Communication and Transportation.
  - Industries.
  - Points of Interest.
  - Physical Features.
  - Education.
  - Native Plant and Animal Life.
  - Cities and Towns.
  - County Government and Agencies.

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- Units for High Fourth Grade (California).
  - Water.
  - Early Inhabitants of the State.
  - Early Explorations and Missions.
  - Winning of California for the United States.
  - Gold Rush and Statehood.
  - Means of Travel and Communication in and to California.
  - Industries.
  - Animal and Plant Life.
  - Points of Interest in the State.
  - State Government.
- Units for Fifth Grade (The Americas and United States).
  - The Beginnings of Discovery.
  - The Race for Wealth in the New World.
  - Peopling the New World.
  - The Making of the United States.
  - The Growth of the United States.
  - The Union in Danger.
  - Inventions Change American Life and Weld the Nation in Spirit.
  - The United States in Recent Years.
  - Our Neighbors North and South.
  - South America.
- Units for Low Sixth Grade (Europe).
  - Europe, the Home of Our Ancestors.
  - Greece, the Land of the Glorious Past.
  - Rome, the World Empire.
  - United Kingdom, Great Britain, an Empire on Which the Sun Never Sets.
  - France, an Agricultural and Manufacturing Country.
  - Germany, a Powerful Industrial Nation.
  - The Lowland Countries of the Western Empire.
  - Switzerland, Playground of Europe and Peace Center of the World.
  - Norway and Sweden, the Land of Seamen.
  - The Iberian Peninsula.
  - Modern Italy.
  - The Danube-Balkan Countries.
  - Modern Greece.

FIG. 5.—*The youngest group, having seen a circus, decide to have one of their own.*

  - Poland.
  - The Baltic Republics.
  - Russia, the Land of Undeveloped Resources.
- Units for High Sixth Grade (Asia, Africa, Australia).
  - Preview of Asia.
  - Southwestern Asia, a Land of Ancient Empires.
  - Asiatic Russia.
  - The Orient, Chinese Republic, Empire of Japan, India and Ceylon.
  - Southeastern Asia and the East Indies.
  - Africa, a Continent of Colonies.
  - Countries of Northern Africa.
  - South Africa, White Man's Africa and Africa between the Deserts.
  - Australia, New Zealand and the South Pacific Islands.

The above lists of units are only suggestive and, so long as she does not encroach on an area of a higher level, the teacher may choose units outside of the list that seem to meet more nearly the needs of her group. The units used by Lincoln teachers during the school year 1935–1936 indicate that in many cases two or more units on the suggested list have been combined, in others entirely new units have been introduced.

UNITS USED DURING THE YEAR

The units used at Lincoln are listed in the order in which they were developed during the year. They are divided according to units conducted under the direction of each teacher. It should be noted that in many instances children who changed rooms and teachers at the beginning of the second semester participated in the first half of one list and the second half of the next higher.

- First (Youngest) Group.
  - The Family.
  - Doll House.
  - A Pet Shop.
  - The Circus.
  - A Market.
- Second Group.
  - The Theater (creative English).

- The Farm.
- The Garden (indoor and outdoor).
- Mexico.

Third Group.
- Trees.
- Primitive Life.
- Eskimos.
- Pueblo Indians.
- Ports of the World.

Fourth Group.
- Indian, Spanish, Mission Period in San Jose (this group had studied modern San Jose the preceding term).
- Germans.
- Chinese and Japanese.
- Animals of Circus and Zoo.
- Desert Peoples.

Fifth Group.
- Transportation and Communication in Santa Clara County.
- Industrial Development in the County.
- Gold.
- Water.
- Our Community.

Sixth Group.
- The Search for Gold in the New World.
- The Making of the United States.
- Westward, Ho!
- How Inventions Changed American Life.
- The Union in Danger.
- Our Neighbors on the South.

Seventh Group.
- Ancient Greece.
- Feudal Life.
- Spain, Past and Present.
- Architecture Marches On (famous buildings of old Europe).
- Peoples and Homes of Modern Europe.

Eighth (Oldest) Group.
- The Mediterranean Countries.
- Australia and the Islands of the Pacific.
- The Scandinavians.
- The Hot Dry Lands.

HOW TWO UNITS WERE LAUNCHED

Although the desires of the children are given consideration, the teacher is responsible for choosing the unit. Whenever valuable suggestions come naturally from the children, she takes advantage of these "leads" and turns them into channels that will point toward the new unit. To leave the choice of units entirely up to the children might lead to a series of disconnected unrelated experiences.

The teacher of the oldest group wanted her children to view densely settled sections of the world in contrast to those that are sparsely settled. She started her group with Hot Dry Lands. As this unit neared completion the children summarized the reasons for there being so few people in the hot, dry countries. The teacher questioned whether anyone could tell why some sections of the world were so *densely* populated. This led to the next unit which she had planned, The Orient.

Since the third group had been learning about Primitive Peoples, Eskimos, and Pueblo Indians, the teacher thought the contrasting people of more modern civilizations should be studied. Near the conclusion of the study of Indians, one of the boys, whose father is a sailor, brought a model of an outrigger canoe to school. The teacher immediately utilized the boat interest by asking how one might get to the country where they used outrigger canoes. A discussion of boats led to the question, where do boats go? And the unit Ports of the World was on its way.

The Theater

At the beginning of the year, the members of the seven-year-old group were in need of training and confidence in oral expression. The teacher planned a field trip to a near-by theater. Here is what resulted, in the words of the teacher.*

One day we visited the theater situated near our school. We were permitted to go backstage, where we saw the large curtain, the lights, switch-

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* Miss Josephine McCabe developed this unit.

FIG. 6.—*Many valuable social experiences may develop along with dramatization activities.*

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board and dimmers. As we had been attempting some dramatization, several of the children suggested that we have a little theater in our room at school.

Among the things suggested as necessary were a curtain, stage furniture, scenery, a box office, a ticket stand, posters and costumes. These various items were suggested, not all in one day, but as the unit progressed.

We found an old white curtain, used years before and not very presentable. An all-over design selected from many made by the children was used to beautify it. The curtain was squared in 8-inch squares and fastened to the wall with thumbtacks. As a section was completed the curtain was raised until the entire surface was covered. The colors selected were yellow and orange with a very simple purple flower in every other square. There were two parts to the curtain; eight children worked at a time. It took about three weeks to complete the curtain, but when finished, it had the appearance of blocked linen. Our janitor put up two poles, fastened them to the floor and ran an iron pipe between them at the top. This made a firm base on which to run the curtain back and forth.

While some children were working on the curtains, others were busy at various things. "The Three Bears" was chosen as the first play to be given. That required beds, chairs, etc. The beds were made of orange boxes, a large one for father bear, middle sized for mother bear, and a small one for the baby bear. Chairs were made, also, from orange crates, covered with yellow chintz. Bowls were made of clay with designs in colors. While the boys were constructing and painting the furniture, the girls were busy making mattresses and patchwork quilts for the beds. Spreads were made of paper of various colors with cutout designs.

Some of the children with special interests in art worked on the back drop, representing the inside of the bears' house. There were two windows with pots of blooming flowers, yellow curtains and a dish shelf, all done in colored chalk.

The box office was constructed of artichoke boxes, covered with silver paper. Cellophane was used for the windows. Tile designs covered the front of the box office. The ticket taker's stand was made of a mush box and a carton, covered with silver paper. A large poster of "Three Bears" was drawn and placed in front of the box office with "Now Playing" lettered above it.

When the theater was nearly completed, someone asked what it should be called. Twelve names were suggested. The children voted by secret ballot,

FIG. 7.—*An exciting scene during the performance of "The Three Bears."*

that is, by whispering to the teacher his or her choice. "Three Bears Theater" had the largest number of votes, hence the name. The name was printed in large letters, as was the price of admission. This necessitated tickets and play money which were made by the children. Ushers were selected, each wore a yellow and orange cape (made of crepe paper) and carried a flash light.

Anyone who wished to take part in the dramatizations could do so. All participated and noticeable improvement was made by those children who had been self-conscious or deficient in enunciation and pronunciation. After hearing the various members of the class interpret the characters, the children decided who were best. Their judgment was satisfactory in the main and the children chosen by them took part in the opening performance.

The costumes consisted of three bear masks, a lace cap for the mother and one for baby, an apron for mother bear, a bib for baby bear, a vest and glasses for father bear. Otherwise the children wore their ordinary clothes. Two other stories, "The Lark and the King" and "The Little Red Hen," were dramatized the same day. Costumes for these plays were made by the children.

When the day of the performance arrived, two boys had charge of the curtain and shifting of scenery. One boy was general manager to call "curtain" when all was in readiness.

The audience stood in line at the box office and bought tickets with play money, gave the tickets to the "taker," who tore off the stub and deposited the ticket in the box. The ushers then conducted the children to chairs which had been arranged in rows like a theater. In order to give more children a chance to participate, there were two announcers, a boy and a girl. The following songs appropriate to each of the stories were sung between acts.

Goldilocks—Rhythm Songs—Abbie Gerish Jones
The Little Red Hen—The Music Hour—First Grade

Some of the reading lessons that developed out of these Theater experiences were:

We went to the Fox California Theater.
We went on the stage.
We saw the big curtain.
We saw the footlights.
It was fun to be on the stage.

The boys made Father Bear's bed.
They painted it green.
Some girls made a mattress.
It is blue and white.

Gail and Paul made some bowls.
They made a bowl for Mother Bear.
They made a bowl for Father Bear.
They made a bowl for Baby Bear.

We are going to make a box office.
We are going to make tickets.
We are going to have ushers.
They will carry flash lights.
We will have a boy to take the tickets.
We will have a girl to sell the tickets.

During the development of this unit we had practice in reading, lettering, drawing, writing, designing, sewing, paper cutting, language and music. We also had experience in the use of wood, paper, cardboard, clay, easel paint, colored chalk, crayon, cloth and house paint.

One of the most beneficial results of the unit was the improvement in ability of the children to express themselves naturally and in good English. All of them showed decided improvement in their ability to speak clearly. The theater is used every day and will continue as a part of succeeding units.

Primitive People

A unit on Primitive People developed with one of the primary groups into a valuable experience. It was rich in content, interesting throughout and afforded abundant opportunity for construction and handwork. In building the tree house and cave, in making the weapons and in writing and presenting the play, many problems arose which required some experimentation before the solution was forthcoming.

The teacher* describes the launching, development and culmination of the unit.

Our unit on primitive people developed as an outgrowth of the study of trees. The fact that trees were used as the homes of people in primitive times led to an interesting discussion. The children were eager to learn more of early people and their ways of living. Several books about tree, cave and lake dwellers were read and discussed.

Then came the suggestion that we build a tree house, a cave, and a lake house in our room. After discussing the possibility of a suitable place in the room for each type of home, it was decided to eliminate the building of the lake house because of the limited space.

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* Mrs. Anna Pohlman developed the unit with seven- and eight-year-olds.

Committees were organized to take charge of the building of the tree house and cave. Boxes and paper cartons were brought to be used in the making of the cave. They were arranged in a pile about 5 feet high. This pile was covered with wrapping paper that had been calcimined a bluish gray. The paper was crushed and wrinkled before it was used to cover the cave. This gave an effect of rock. The floor of the cave was covered with branches and leaves. In order to give more realism, shrubbery was brought from the creek and banked around the cave. A deer's head, brought by one of the girls, peered through the greenery at one side.

A large paper box was used as the base for the tree house. After the top and one side of the box had been removed, bamboo sticks were tied firmly to each corner of the box. The sticks used for the roof were tied to these uprights. Then the entire structure was covered with bamboo sticks which were tied to the framework about 5 inches apart. It was then covered with dry grass, which had been secured by some of the boys from the creek banks and vacant lots. The grass was woven over and under the bamboo sticks on the sides.

The tree house was then mounted on the stump of a tree to which it was nailed. A ladder, made of bamboo, completed the house. One of the girls brought a deerskin. Another contributed a sheepskin that was used for covering the floor.

A group of children worked on the wall frieze of a jungle scene. This was done in colored chalk on wrapping paper, which had been stretched over the wall back of the tree house and cave.

Interest continued to grow daily. An original play developed during the language period. Costumes were now necessary. Gunny sacks were used for the boys' costumes. The boys ripped, fringed, and colored the sacks with crayons in various ways to represent skins of primitive animals.

The girls brought old sheets from home. They, too, striped or spotted them with crayons. They completed the costumes by fringing the edges. Each child made his own garment. Wigs were made of baling rope.

Ornaments being necessary to the completion of the cave man's costume, shells, acorns, squash seed, etc., were strung. Teeth and claws were made of clay. They were also strung to form chains.

Clay bowls of the type used by primitive people were made. There were other things that were needed as stage properties for the play. Sharp rocks,

● Fig. 8.—*The cave man protects his possessions.*

bones, and round rocks were collected and utilized in making spears, hammers, knives, tools, etc.

Firebrands were made of sticks and colored paper. A mammoth's tusk was made of clay and a piece of paper tubing.

The children brought wood for the campfire that was placed in front of the cave. A rock covered with colored paper gave the effect of fire. A bundle of sticks was left by the fire.

Other things characteristic of primitive life such as gourds, coconut shells, clam shells, wild nuts, etc., were collected. A cave door was made by weaving reeds over the bamboo frame.

During the preparation for the play, every effort was put forth to give the room the complete atmosphere of primitive life.

A series of pictures, painted by various members of the class, displayed on the bulletin board and in the border space around the room told some of the interesting events in the lives of primitive people.

Cooperative stories were written on large news sheets and used as reading lessons. Other related reading lessons were taken from the simpler books on primitive people. A large book containing the children's best stories and illustrations was made.

The children learned to spell many new words which were used when writing their stories.

Combinations were learned when applied to groups of animals or people in families or clans.

Health and living habits of primitive people were contrasted with present living conditions.

During the physical education period primitive dances were learned.

Words for two original songs were composed and written to a familiar melody.

Slides on primitive life, borrowed from the visual department, proved of great interest to the children.

As a culmination of the unit, the children invited their parents and the other primary grades to the final performance of the play.

The play, as written by the class and presented in full costume for parents and friends, is given here.

● FIG. 9.—*An exhibit of primitive tools and weapons collected or made by second-graders.*

The Land of Long Ago

FAIRY. Would you like to go to the Land of Long Ago?

CHILD. Oh, yes, I should.

FAIRY. I'll have to take you to your mother first. (*Goes with child to mother.*)

FAIRY. May your little girl go to the Land of Long Ago?

MOTHER. Yes, if you take good care of her.

CHILD (*to Fairy*). What is it like and what shall I see?

FAIRY. You'll see many strange things.

CHILD. I must take my bag with me. (*Gets bag.*)

(*They go to the Land of Long ago.*)

CHILD. Who are you and where did you come from?

SHARPTOOTH. I am Sharptooth and we are the people of Long Ago.

CHILD. What a strange house. It is different from ours.

FLEETFOOT. This is the only kind of house we know about.

CHILD. Why do you build it of grass?

FLEETFOOT. We do not know about anything else.

CHILD. But why do you build it in a tree?

FLEETFOOT. So that we shall be safe from the wild animals.

CHILD. Why is the roof so steep?

FLEETFOOT. So that the rain will run off. It rains very hard here.

SHARPTOOTH. How beautiful your hair is. What makes it so beautiful?

CHILD. I brush and comb it every night and every morning. I always brush and comb it before I eat.

SHARPTOOTH. What is a brush? What is a comb?

● FIG. 10.—*Primitive people are real to these children.*

Child. I shall show you. (*Takes comb and brush from her bag.*) I use it this way. I brush my hair every night and every morning.

Sharptooth. What makes your teeth so white?

Child. I brush my teeth at least twice a day with a toothbrush.

Sharptooth. What is a toothbrush and how do you use it?

Child. I shall show you. We brush our teeth up and down this way.

Sharptooth. How clean your skin is. Why doesn't mine look like yours?

Child. We wash with soap and warm water every night and every morning. We always wash before we go to the table. We take a bath twice a week with warm water and soap.

Sharptooth. We never have warm water. We always bathe in the river Soap. What is that?

Child. This is it. We use it with a wash cloth to scrub ourselves clean.

Child (*to Sharptooth*). Have you a little child?

Sharptooth. Yes. He is under that tree by the fire. Come, Bodo, let me watch the fire while you rest awhile.

Bodo. No, mother, I'm not tired. The fire is my friend. It drives away the wild animals. If we stay near the fire we are safe to live on the ground

Fairy. Come, little girl. We must hurry along.

Child and Fairy. Good-by, Sharptooth, Fleetfoot, and Bodo.

Fairy. I'll show you how people lived after they lived in trees.

(*They go to the cave.*)

Child. What a big cave! Do people really live in it?

Fairy. Oh, yes. Firekeeper will tell you about that.

Firekeeper. This is Saber-tooth's cave.

Child. Who is Saber-tooth?

Firekeeper. He is a big animal that looks like a tiger and has two big saber teeth. We waited many days for him to go south. One day he disappeared. We thought he was gone and took his cave. Then he came back. How frightened we were. Strongarm watched Saber-tooth. He is very brave. He made a weapon of stone and killed him. Now he always wears Saber-tooth's skin and the two big saber teeth on feast days.

CHILD. Who is that in the cave?

FOXFACE. I am Foxface. I am drawing pictures on the wall.

CHILD. What are you using?

FOXFACE. I am using a sharp stone.

CHILD. It seems to be so dark in there. How can you see?

FOXFACE. One-ear holds a fire brand for me.

CHILD. Why do they call you firekeeper?

FIREKEEPER. I keep the fire burning night and day. It keeps the wild animals away. If I let the fire go out we must go many, many miles away to another fire clan for more fire or rub sticks together as Sharpeyes is doing.

CHILD. Who is Sharpeyes?

FIREKEEPER. He is the old man who taught us how to make fire. He sits over there.

CHILD (*to Sharpeyes*). What happens when you rub the sticks together, Sharpeyes?

SHARPEYES. Sparks fly out and start the leaves burning.

CHILD (*to weapon makers*). Are you trying to make a fire, too?

FIRST WEAPON MAKER. Oh, no. We are making tools and weapons.

SECOND WEAPON MAKER. We make spears, knives, and hammers of stone. Sometimes we use large bones for the handles.

THIRD WEAPON MAKER. We make needles of bone, too. We use them to sew skins together for our clothing. We punch holes in the skins. Then we lace them together with strips of skin.

CHILD (*to Fourth Weapon Maker*). What is this you have around your neck?

FOURTH WEAPON MAKER. These are teeth and claws of animals I killed. The women wear ornaments too. Brighteyes and her little girl are making some over there.

Child. Oh, I must see them. Will you show me the things you are making? Do tell me about them.

Brighteyes. I'll be glad to. These are squash seeds. These are made of shells, and these are teeth and claws of animals the brave men killed.

Ramona. Strongarm is very brave. He will show you some of the teeth and claws of animals he killed.

Child. Who is Strongarm?

Ramona. He is the man that stands by the cave.

Child. Are you Strongarm?

Strongarm. Yes, I am Strongarm.

Child. Why do they call you Strongarm?

Strongarm. I care for all my people and protect them from wild animals. I have killed many, many wild animals.

Child. What are these things you have around your neck?

Strongarm. These are Saber-tooth's teeth. I killed him so my people could have his cave.

Child. Who are these people coming?

Strongarm. They are the women who have been out working.

(*Enter men and women.*)

Child. Why do you carry a firebrand?

First Man. The wild animals are afraid of the fire and this is the way we protect the women.

Child. What are these things you are carrying?

First Woman. We are carrying water in these gourds.

Child. We don't carry water that way.

Second Woman. We have nothing else that will hold water, so we must use gourds or coconuts.

(*Enter Torad, running.*)

TORAD. Oh, Mother. This is the bowl you threw into the ashes. It has turned red. Look. It holds water and the water isn't muddy either.

MOTHER. Bring me some water. I want to see it. Oh, how thirsty I am! May I have a drink? Oh, this is fine. Make me more bowls like that. (*Torad starts off.*) Where are you going?

TORAD. I am going to the river to make more. I shall make them from the yellow mud of the river. Then I shall put them in the fire. That will make them hard.

MOTHER. Teach us all how to make them.

TORAD. As soon as I come back with the mud, Mother.

CHILD. What are you carrying in the basket on your head?

THIRD WOMAN. I have been out gathering wild nuts and berries for our dinner. How tired I am! I must put these nuts and berries down.

FOURTH WOMAN. I am tired, too. I must put down these sticks that I gathered for the fire.

CHILD. Why don't you carry the heavy sticks? The men in our land always carry the heavy things for the women.

LAST MAN. Women are not strong enough to protect the men from wild animals so I carry my spears and knives to kill the wild animals if they should come near. I must see if the women have the door of the cave finished.

CHILD. Oh, where are they? May I see, too?

LAST MAN. Yes, come along.

CHILD. What are you making?

FIRST WOMAN. We are making a door for the cave.

SECOND WOMAN. When we go out to hunt for nuts and berries we put our children in the cave. We put this door in front of the cave so that wild animals will not eat our children. Sometimes we roll a big stone in front of the cave. (*Animal roars.*) Oh, I hear some wild animals now.

STRONGARM. Where is my club? Come, Sharpeyes. Bring your weapons. We must kill some animals for our feast. (*They go away.*)

CHILD. Oh, Fairy. Stay near me. I am so frightened. Take me away.

FAIRY. No, no. We had better stay here. They would be sure to eat us.

CHILD. Here come some women. They seem to be carrying something. What are they carrying?

(*Enter women.*)

LAST MAN. They are carrying a big tusk.

CHILD. Is that an elephant's tusk?

LAST MAN. No. That is the tusk of a mammoth.

FIRST WOMAN. Strongarm and Sharpeyes killed him. We shall go back for the other tusk after we have rested awhile.

SECOND WOMAN. We are so tired. Let us put it down by the fire.

THIRD WOMAN. We have carried it a long way. It is so heavy.

FOURTH WOMAN. Look, Sharpeyes killed a deer. Now I have a skin to make a cradle for my little baby.

CHILD. We don't keep our children in a skin cradle.

FOURTH WOMAN. Isn't that skin too stiff? I shall rub it with fat and pound it. I shall chew some of the harder parts. That will make it nice and soft.

FIFTH WOMAN (*dragging skin bag of meat*). Come, One-ear, help me drag this meat.

ONE-EAR. I'm coming. I'll help you.

SHARPEYES. Now we have meat enough for our feast.

CHILD. Oh, it is getting dark and I am so tired. I don't want to stay all night. I want to go home to see my mother.

FAIRY. All right, Barbara. We'll hurry away.

STRONGARM. Take this firebrand with you, then the wild animals will not harm you. Would you like us to sing for you?

CHILD. Yes, do.

CAVE MEN'S SONS

(Tune, "The Street Car," from MUSIC HOUR, Book I)
We are the jolly cave men,
Who are so strong and brave.
We fish and hunt for big fat deer,
Without a single fear.
We like to sleep on branches,
Upon the old cave floor.
We wear skins for our clothing,
And feel the cold no more.

CHILD. Thank you. That was beautiful. Good-by, dear cave people. I have learned so much.

CAVE PEOPLE. Good-by, Barbara.

(*Barbara and Fairy return home.*)

MOTHER. Well, well, Barbara. You are back so soon?

CHILD. Yes, mother dear, I didn't want to stay all night and sleep on branches on the cave floor. I like my own clean little bed better. Those people eat roots, raw meat and the bark of trees. Our food is so much better. I'll never say "I don't like spinach" again.

(*Child sings*. Tune, "The Street Car")

I'm glad I'm not a cave man,
That lives inside a cave.
I'd have to sleep on branches green,
And always be quite brave.
I'd have to wear skin clothing,
And eat roots and raw meat.
I like my own home better,
It is so clean and neat. (*End.*)

From listening to group discussions and observing activities in the classroom and on the playground, the teacher is certain that as a result of the unit on Primitive Life the children have developed a much better appreciation for the comforts of home; they have developed a higher regard for such commonplace articles as needles, buttons, cloth, etc.; they recognize the importance of cooperation; their imaginations have been stimulated and their powers of observation have been increased.

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STUDYING WATER

An illustration on the fourth-grade level will show how unit suggestions given in the course of study are adapted to actual classroom situations. First is given an outline of a unit on Water as it appears in the Social Studies Course for Elementary Schools of San Jose, Calif. This will be followed by a description of the unit as it actually developed in the high fourth grade at Lincoln School.

Water

I. Aims.
   - A. To aid the child to see the necessity of water in everyday life.
   - B. To aid the child to understand how water has changed the ways of earning a livelihood and how it has affected the industries of California.
   - C. To develop an appreciation of the cost of water to the farmer and to the city dweller.
   - D. To teach man's relationship to nature; how water in California has affected developments of all kinds.
   - E. To teach the great need of water and the necessity of conserving water in California.

II. APPROACHES.

- A. Health lesson may lead to a discussion of the necessity of water to sustain the body and as a means of cleansing the body.
- B. Discuss the local weather. When did it rain last? When may we expect rain?
- C. Current local events relating to water.
  - 1. Weather report.
  - 2. Conservation.
  - 3. Legislation.
- D. Discuss the food eaten in a day. Could it have been produced without water? Was it brought by water transportation?
- E. Has anyone been to the mountains, seen a spring, or snow? Has anyone seen an irrigation well?
- F. Show a motion picture on some subject that is closely related to water, *i.e.*, electricity.
- G. Show flat pictures related to water, such as: irrigation, dams, home uses of water, recreation dependent on water.
- H. Recall the study of Santa Clara Mission and the danger of floods in the early days of Santa Clara Valley. Compare with the conditions today.
- I. Show a relief map of California. Indicate some of the important relief features of the state.

III. CONTENT.

- A. Uses of water.
  - 1. Food.
  - 2. Cleanliness.
    - a. Clothes.
    - b. Body.
    - c. Sanitation.
  - 3. Household uses.
  - 4. Community uses.
    - a. Fire.
    - b. Sewer.
    - c. Parks.
  - 5. Irrigation.
    - a. Orchards.
    - b. Truck farms.
    - c. Gardens.
      - (1) County.
      - (2) City.

    6. Power.
    7. Transportation.
    8. Pleasure.
- B. The source of water.

  Evaporated from the ocean, carried by the wind to the mountains and condensed into rain or snow, returned to the ocean by rivers and underground streams.
- C. Physical features of California; stress relationship to water.
    1. Mountain ranges.
        - a. Coast Range.
        - b. Sierra Nevada.
    2. Mountain peaks.
        - a. Mt. Hamilton.
        - b. Mt. Whitney.
        - c. Mt. Shasta.
        - d. Mt. Wilson.
        - e. Mt. Lassen.
    3. Valleys.
        - a. Great Valley.
            - (1) Sacramento.
            - (2) San Joaquin.
        - b. Santa Clara Valley.
    4. Deserts and effect of irrigation.
        - a. Imperial Valley.
        - b. Colorado Desert.
        - c. Coachella Valley.
        - d. Antelope Valley.
        - e. Mohave Desert.
        - f. Death Valley.
    5. Coast line.
        - a. Long coast line and effect upon climate.
            - (1) Ocean currents.
            - (2) Winds.
        - b. Bays.
            - (1) San Francisco.
            - (2) San Diego.
            - (3) Monterey.
            - (4) Humboldt.
            - (5) Los Angeles harbor.

        6. Lakes.
            a. Tahoe.
            b. Dry lake beds.
                (1) Tulare.
                (2) Buena Vista.
        7. Rivers.
            a. Sacramento.
            b. San Joaquin.
            c. American.
            d. Colorado.
            e. Coast rivers.
                (1) Klamath.
                (2) Eel.
                (3) Russian.
                (4) Salinas.
                (5) Santa Anna.
                (6) San Gabriel.
                (7) Los Angeles.
        8. Boundaries of California.
            a. Mountains north and east.
            b. Ocean west.
            c. Colorado River, gulf and peninsula on south.
    D. Irrigation.
        1. Orchards.
        2. Alfalfa and dairy ranches.
    E. Farms and products of:
        1. Tule lands.
        2. Valleys and irrigation.
            a. Coast valleys.
            b. Southern California.
            c. Great Valley.
    F. Irrigation districts and water systems.
        1. Canals.
        2. Reservoirs.
    G. Wells.
    H. Electricity.
        1. Dams.
        2. Power houses.
        3. Transmission towers.
        4. Uses of electricity.

- I. City water supply.
    - 1. San Francisco.
    - 2. Oakland.
    - 3. Los Angeles.

IV. ACTIVITIES.

- A. List and illustrate ways we use water every day.
- B. Make a comparison of water uses in the city and in the country.
- C. Make a house plan that shows all rooms of a house. Paste pictures that illustrate the uses of water in each room.
- D. List articles we wear or use that are brought to us by water.
- E. Make a relief map of California and locate the various physical features.
- F. Collect current newspaper clippings that feature water.
- G. Make posters that might be used in a "Forest Conservation" campaign.
- H. Make a large outline map of California and show the points visited by "grandfather and the children" as related in OUR CALIFORNIA HOME.
- I. Make a product map of the state.
- J. Pretend you are a drop of water and write your experiences.
- K. On an outline map, locate the powerhouses and dams in your vicinity.

V. MATERIALS.

- A. Visual aids.
    - (See list of visual aids available from central office.)
- B. Poems.
    - 1. Flynn, MacLean and Lund, VOICES OF VERSE, Book II, Lyons and Carnahan, 1933.
        - a. "Runaway Brook."
        - b. "Rain in April."
        - c. "The Rain-drop's Ride."
    - 2. List of poems included with English course.
- C. Songs.
    - 1. MUSIC HOUR, Book III, California State Series.

a. "The Rainbow Fairies"	page 78.
b. "Song of the Snow"	page 76.
c. "Water Dance"	page 53.
d. "The Old Man"	page 69.

VI. OUTCOMES.

A. Attitudes.
  1. A realization of the important part water has played in California history and geography.
  2. A realization of the degree to which water has affected the industries of the state.

B. Definite facts to be learned.
  1. All water comes from the ocean.
  2. The sun evaporates water from the ocean.
  3. Evaporated water makes clouds.
  4. Wind blows the clouds over the land.
  5. Clouds cool on the hills or mountains and make fog, rain or snow.
  6. The rain and melted snow in mountains form streams. The streams join to make rivers.
  7. The rivers flow back to the sea.
  8. Some of the water in the mountains soaks into the ground. It comes down to the valleys underground and fills the wells.
  9. Farmers pump water from wells for irrigating their crops.
  10. Irrigation districts have dammed rivers and built canals to bring water to farms.
  11. Power plants generate electricity at the dams.
  12. San Francisco and Los Angeles have piped water many miles to meet the needs of their inhabitants.
  13. Transmission lines on transmission towers carry electricity.
  14. Southern California valleys are important for raising citrus fruits, dates and vegetables.
  15. The Great Valley produces large quantities of fruits and vegetables.

C. Skills.
  1. Ability to locate on a relief map valleys, mountains, rivers, lakes and bays.
  2. Ability to tell how these relief features influence water.

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II. Teacher.

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The following description is of a unit entitled Water and was developed by the high fourth grade at Lincoln School under the direction of Mrs. Mabel Willson. The unit continued for seven weeks.

Water

I. Objectives.

A. To lead the children to appreciate the importance of water.
B. To teach the children the many uses of water.

C. To teach the children something about the sources of water, electricity, irrigation.
D. To develop cooperation in working together.
E. To develop the following habits and abilities:
    1. Neatness.
    2. Exactness.
    3. Organization.
    4. Summarization.
    5. Participation.
F. To develop and foster desirable social habits.

II. SUBJECT MATTER, MATERIALS AND ACTIVITIES.

(Detailed content will be omitted.)

A. Subject-matter fields included in this unit.
    1. Social Studies.
    2. Health.
    3. Written and oral English.
    4. Spelling.
    5. Reading.
    6. Physical Education.
    7. Art.
    8. Music.
    9. Literature.
    10. Arithmetic.
    11. Handwriting.
B. Activities in which the children were engaged.
    1. Constructing water cycle.
    2. Dramatizing.
    3. Making books.
    4. Conducting experiments.
    5. Telling stories.
    6. Pantomiming.
    7. Searching for information.
    8. Creating rhythms and dramatic play.
    9. Drawing.
    10. Writing.
    11. Reading and memorizing poetry.
    12. Singing.
    13. Solving problems.

C. Materials used.

1. Cardboard boxes, various sizes.
2. Butcher paper.
3. Construction paper of many colors.
4. Artificial snow.
5. Cement.
6. Sponges.
7. Laths.
8. Wire.
9. Cellophane.
10. Flour.
11. Salt.
12. Paints.
13. Colored chalk.
14. Corrugated paper.
15. Pictures.
16. Sand.
17. Clay.
18. Twigs.
19. Glue.
20. Toy autos, dolls, boats.

III. Procedure.

A. Launching the Unit.

Many dams were being built throughout the county to conserve water for the community. During the free discussion period, the first hour of the morning, many of the children told of visits to these dams. The newspapers published pictures of various stages of development of the dams. These pictures were brought into the classroom by several children, for there was much interest in what the correct use of the dams might do to improve conditions in the county. Many questions were asked concerning why these dams were being built. From the discussion of the reasons for building dams, the unit emerged. Other questions were immediately forthcoming:

Why is water so important that we should conserve it?
How do we use water?
Upon what does water depend?
How do we get electricity from water?
Where does our community get its water?

The teacher explained that answers to these questions could be answered by reading and by taking excursions.

To further the interest that had been shown in this subject, the teacher placed pictures and clippings on the bulletin board. A "beauty table" was arranged with a water scene in blue and silver.

B. Suggested activities.

Members of the class discussed what they might do to make water and its values more understandable to them. They decided to make a border, showing uses of water in the home, city, farm and "great outdoors."

They also decided they would like to construct a scene showing a complete water cycle. This was to include:

1. Sun.
2. Clouds.
3. Wind.
4. City.
5. Farm.
6. Ocean.
7. Mountains.
8. Snow.
9. Rivers.
10. Dams.
11. Powerhouse.
12. Transmission towers.

IV. DEVELOPMENT.

A. Social Studies.

During the discussion period the following topics were discussed:

1. Uses of water, first and second weeks.
2. Sources, third week.
3. Physical features, fourth week.
4. Irrigation, fifth week.
5. Electricity, sixth and seventh weeks.

B. Health.

Throughout the unit, the importance of water in the maintenance of health was emphasized. As each new use was discussed, its importance for individual or community health was stressed.

C. Construction period.

Grandfather (the discussion leader for the group)* announced after the discussion that there was work to be done. He would then discuss with the different groups what they had accomplished and what was yet to be done. The water cycle was "built" in the classroom. This is how it was made. The sky, 9 by 12 feet, was made by pasting together strips of butcher paper and stretching them over a frame. This was then colored with blue chalk, which was later rubbed in with blotting paper. The two mountains in the far background were made by placing butcher paper over triangular frames made of laths. They were then colored with chalk of violet and red-violet hues. On the crest of these, artificial snow was sprinkled over moist glue. The mountain in the foreground was made of crumpled paper and large packing boxes. This material was then painted with green and violet poster paint and then shaped. In one of the crevices of the mountain a stream of blue was painted and was covered with cellophane to give the appearance of water.

A dam was placed at the foot of the mountain. This dam was made from a wooden box and covered with a thin coat of concrete. The children thought the dam would then hold water but soon they found that it would not. Small nails and wire were used to form a walk around the dam. At the foot of the dam a power house was made from a cardboard box and covered with a mixture of flour, salt, water and a speck of black paint. The penstock connecting these two was made of a round stick of wood with a metal tip which was bent to resemble the elbow of the pipe. The transmission towers were made of squared lollipop sticks and painted with silver paint. These ran along the stream to the city. The levees of the stream were made of paper crushed and painted a blue-green. The stream was painted blue and covered with cellophane. The irrigation gate was made of softwood by one of the boys who visited an irrigation ditch during the week-end. Cardboard boxes, cut and stuccoed, made the house and barn. The orchard was made of twigs arranged in rows and fastened to the floor with clay bases.

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* The term "grandfather" was used because grandfather led the discussions in OUR CALIFORNIA HOME, a California State Textbook that contains much valuable local material on water.

The ground was of dirt and sand. The ditches were easily made by pulling a stick through the dirt.

At the opposite end of the room was constructed the ocean scene. The ocean was made of corrugated paper and covered with cellophane. It was painted in shades of blue with yellow and orange and white as the reflections of the sun and the whitecaps. The ocean was surrounded by white sand. Toy boats and autos were placed on the water and beach. On one side of the ocean was a city made of cardboard boxes which were also covered with a salt and flower mixture. Small Christmas-tree lights were placed in the houses of the city. Further along the shore was a hill on which a lighthouse (made of cardboard) was placed. Trees made of sponges were placed on the hill and mountains. The lighthouse hill was painted yellow and green. A sky, made in the same way as the other, was placed behind the ocean scene. On it were pasted large clouds and a wind. These were made of butcher paper and painted white and silver. The wind was a cherub with puffed cheeks, blowing. The children found this idea of representing the wind in one of their reference books. It was necessary to have clouds extending from the ocean to the mountains. To show this, wire was stretched from one end of the room to the other. On the wire were hung clouds, similar to the ones pasted on the sky background. A sun was absolutely necessary. It was made of two drumheads which were covered with gold paper and suspended over the electric light in the center of the room.

D. Spelling.

Sixteen spelling words were chosen each week from the list asked for by the children as they wrote their motor logs.

Spelling games used included many common drill games with such new and fantastic names as "water polo," "water meter" and "put out fires."

E. Motor logs.

Each day the children wrote in their motor logs the things that happened in the room and the facts covered during the discussion periods.

F. English.

Each day the work in English depended on the phase of the unit being studied. Some types of lessons included:

1. Play writing.
2. Letter writing.
3. Dramatizations.
4. Writing original poems.
5. Conversations.
6. Riddles.
7. Prepared reports.
8. Stories.
9. Telephone conversations.

Some examples of poems written by members of the class follow:

POEMS ON THE SEA

When I was playing by the roaring sea,
I was as happy as I could be,
I saw the waves come crashing in,
I wondered where they had been.
Class

I saw a man go fishing,
I asked him if he was wishing,
"Yes," said the fisherman,
"I am trying to get a fish—if I can."
Constance

I love to play on the sandy shore,
And listen to the dark sea roar,
I love to swim and have some fun,
In spring when all our work is done.
Henrietta

The color of the waves was blue and white,
As they came rolling in with all their might,
I saw a boat out on the sea,
It was heading straight for me.
Frank

I saw a wave come rolling in,
I said, "Where have you been?"
The wave said, "I've been far from here."
I asked him, "Can I go with you, my dear?"
Eddie

When I was playing in the sea,
Some waves came in and tumbled over me.
Rosie

I threw my big red beach ball to the sea,
And then he threw it back to me.
Norman

I saw a boat go sailing by,
I wondered where it would go, where and why,
It looked like a bird with a silver wing,
I saw the name of it, "The Delta King."
It was all red, blue and white,
And oh, it shone so bright,
In the gay, yellow sunlight,
I wondered if I was right.
Elden

KING SUN

The sun is golden all the day,
At night the stars come out to play,
But when the clouds are dark and gray,
The little sunbeams cannot play.
Norman

As I was taking my nap one day,
I saw the sunbeams jump and play;
They jumped and played on the windowpane,
Then went away when it began to rain.
They came back again in spring,
To ripen the fruit and golden grain.
Richard

The jolly sun
Is full of fun,
He shines and shines
On the great big pines.
Lawrence

The clouds are white and sometimes gray,
And in the winter they like to play.

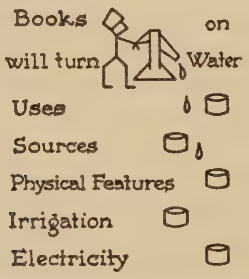
The sun drew them up one day
And they have not yet gone away.
Barbara

The happy sun
Is full of fun;
He draws up water to form a cloud,
And then it rains, oh, so loud!
Dorothy

I saw a cloud go sailing by,
I wished and wished that I could fly.
I always watch the clouds so high,
Good-by, my cloud, good-by, good-by.
Frank

G. Reading.

The reading lessons were related to water. A reading chart like the one in the illustration was used to stimulate interest in reading.



As a child read an article or a book that told of the uses, sources, physical features, etc., he filled out a slip of paper giving his name and the name of the article read. This slip was placed in the "glass" (pocket) opposite the proper item on the chart.

Many different types of reading were included.

1. Group reading.
2. Reading dramatizations.
3. Preparation for audience reading.
4. Audience reading to the group.
5. Silent reading for facts and reports.
6. Reading to answer questions.

H. Physical education.

Games were related to the unit. Some used included:

1. Froggie in the sea.
2. Pincho—pass glass of water.
3. Hill dill—rain, rain.
4. Water sprite.
5. Crossing the brook.
6. Brownies and fairies—sun and clouds.
7. Jack, be nimble, jump over the stream.
8. Charley over the water.
9. Stop and start—water faucet.
10. Forest lookout—put out fires.
11. Zigzag relay—rocks in the stream.
12. Farmer and crow—water makes seeds grow.
13. Double-circle relay—electric current.
14. Carry-and-fetch relay—over the stream.

Rhythms were also used. This unit lent itself very readily to interpretative dancing. Dances of the sun, waves, trees, snow, etc., were developed.

I. Art.

Formal art lessons were only taught once a week, since the construction work called for a large amount of art work. However, when a new technique was being taught, the application was made to water and its uses.

J. Music.

Many water songs are available. The songs that were learned were sung for the parents when they visited. Songs included:

1. "Wading in the Brook," Churchill, Book V.
2. "Teakettle Song," same.
3. "Snowflakes," Churchill, Book II.
4. "Little Rain Drops," MUSIC HOUR, Book III.
5. "Springtime Song," Churchill, Book II.
6. "Water Dance," MUSIC HOUR, Book III.
7. "Birds and Clouds," same.
8. "Wind Song," same.
9. "Brook Song," same.
10. "Sunrise," JUNIOR SONGS, Book I.
11. "In from the Sea," Intermediate Music.
12. "Clouds," MUSIC HOUR, Book IV.
13. "Sun and Showers," same.

14. "The Wind," same.
15. "Winds Are Blowing," same.

K. Literature.

Poems were read. The teacher also read PROFESSOR PECKHAM'S ADVENTURES IN A DROP OF WATER by Smith.

L. Arithmetic.

Arithmetic drill games were given names that suggested the uses of water. Although practical measuring was used in the construction work, additional drill periods were included each day. During these drill periods the addition, subtraction, multiplication and simple division facts were learned or reviewed.

M. Handwriting.

Whenever formal handwriting was taught, the drills were made to correlate with the unit. Making waves, boats, etc. are examples.

V. CULMINATION.

At the completion of the unit, two other groups were invited to hear class reports and listen to water songs. Parents were also invited to see the frieze and hear an explanation of the water cycle.

VI. OUTCOMES.

A. Knowledge of:
1. Uses of water.
2. Importance of water.
3. How clouds are formed.
4. How rivers grow.
5. How physical features affect water.
6. Irrigation.
7. How electricity is made.
8. The role of the sun and winds.
9. Dams and reservoirs.
10. Value of illustrations for information.

B. Habits and skills.
1. Answering questions through reading.
2. Being a good listener.
3. Being willing to help others.
4. Using books for illustrative material.
5. Organizing content material.
6. Developing ability in construction.

  7. Completing a task.
  8. Being neat.
- C. Attitudes and appreciations.
  1. Realization and appreciation of the importance of water.
  2. Recognition of what water does for us.
  3. Joy and friendliness in playing and working together.
  4. Recognition of the good work accomplished by members of the group.
  5. Enjoyment in planning for the pleasure of the group.
  6. Growth in independence, unselfishness and responsibility.
  7. Appreciation of the value of good books for solving problems, giving information, and providing enjoyment.

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     - b. Weather.
     - c. Climate.
  2. Motion pictures from central office library.
     - a. Irrigation.
     - b. New York Water Supply.
  3. Slides and stereographs.
     - a. Lakes.
     - b. Bays.
     - c. Harbors.
     - d. Mountains.
  4. Flat pictures.
     - a. Magazines.
     - b. Newspapers.

- C. Poems.
  - 1. RING-A-ROUND.
    - "On the Beach," Stapp.
    - "Washday," Upson.
    - "Fun on the Beach," Wilking.
  - 2. I SPEND THE SUMMER, Tippett.
    - "The Seashore."
  - 3. ANYTHING AND EVERYTHING, Aldis.
    - "Brooms."
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    - "Mist," Miller.
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It will be noted from the foregoing example that every possible attempt was made to make the children "water conscious." Some skeptic will say that fourth-grade children would be "sick and tired" of water long before the expiration of the seven weeks that were consumed in this unit. The answer to this criticism is that there was no predetermined date for ending the unit. As soon as the available material was exhausted and interest began to lag, the teacher arranged the date for inviting parents and the other groups to hear an explanation of the water cycle. One child asked, "What did the Indians know about the uses of water?" This gave a lead to selection of the next unit.

Soon all were busy attempting to find the answer to the boy's question, and the next unit was under way. A study of the habits and customs of the early California Indians made a good unit to follow the study of water. Here was a splendid opportunity to make a comparative study of health and sanitary conditions in early California as compared with their state as the children know it today.

It must, also, be remembered that the members of this group had many opportunities to experience other things than *water* during those seven weeks. During the periods they were in the library, they could read "for fun" anything of their own choosing. The assembly and club periods gave opportunity to develop special interests of individuals.

WORKING PROGRAMS OF THE VARIOUS GROUPS

Perhaps a glance at the working program of each teacher may be the best way to understand how the school day is spent in the various groups. It should be noted that these programs are very flexible and teachers are free to make any adjustments they deem advisable.

Since Lincoln is a public graded school, the grade designations are still maintained but in name only. "First Group" includes low and high first grade, "Second Group" is low second and part of high second, "Third Group" contains the remainder of high second and all low third, "Fourth Group" is a mixture of high third and low fourth, "Fifth Group" is composed of high fourth only, "Sixth Group" includes low fifth and a part of high fifth, "Seventh Group" is made up of the remainder of high fifth and all low sixth, "Eighth Group" includes all the high sixth.

In none of the groups above the primary grades is it possible to tell who are members of one grade and who belong to the other except during the "skills and drills" period. Here the children are divided for arithmetic practice according to the school grade to which they belong. During all other periods of the day they are a part of the class group. When the children are working in committees, no distinction is made as to whether one is in one "grade" or the other. When they read, books are used that fit the level of reading development the child has reached regardless of his "grade" designation. When they need to know how to spell certain words they learn the words that are needed and not those that are included in some word list for a particular grade.

Even in the primary grades no pronounced distinction is made, but one can usually tell the more advanced children by their mastery of the skills of reading.

The teacher of the youngest group carefully observes each child in order to determine his readiness for reading. When school opened in September a unit on The Family was developed, with only such incidental reading as cooperative stories, signs, bulletins, etc. After 4 weeks the teacher administered the Pintner-Cunningham Primary Mental Test* and the Stone-Grover Classification Test for Beginners in Reading.† About half the children were found to have mental ages of six years or more, a score of 30 or more on the Stone-Grover test, and to satisfy such other criteria as: (1) lack of physical defects (or such defects referred to school nurse), (2) use of English-complete sentences, wide vocabulary, lack of foreign-language handicap, speech defect, (3) background of experience, parents' interest in school, opportunity for books and stories in home, opportunity for work and play with other children, acquaintance with environment, (4) interest in learning to read, (5) evidences of personal adjustment, (6) ability to think through a simple problem, (7) ability to see likenesses and differences.

Formal instruction in reading was begun with this group after 6 or 8 weeks of activity, and cooperative story reading.

The other half of the children were given a program designed to build for reading readiness. Activity work was continued, as were cooperative stories, extension of firsthand experience, practice in oral language, speech correction in some cases, and wide experience with books and stories read by the teacher. The Betts Test‡ was used to indicate each child's visual readiness for reading. In one case, eye correction was necessary, and every effort was made to remedy all physical defects. Some of the children were ready to begin formal reading after a few weeks, and a large number did preprimer reading, though not so much as those in the first group. A few children had no reading during their first semester in school.

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* Pintner, Rudolf, and Bess V. Cunningham, PINTNER-CUNNINGHAM PRIMARY MENTAL TEST, World Book Company, Yonkers-on-Hudson, N. Y., 1923.

† Stone, Clarence R., and C. C. Grover, CLASSIFICATION TEST FOR BEGINNERS IN READING, Webster Publishing Company, St. Louis, Mo., 1933.

‡ BETTS READY TO READ TEST, Keystone Telebinocular, Meadville, Pa., Keystone View Company, 1935.

In every case the aim is to prevent failure, discouragement and subsequent reading disabilities by beginning reading instruction only when children are mature enough to profit by it.

As will be seen in the working programs, approximately one half of the school day is given to skills and drills in the primary groups. This is necessary, for these children are getting their first experiences with reading and, later, with writing, spelling and numbers. In the older groups from a fourth to a fifth of the time is given to skills and drills.

FIRST GROUP (Youngest)

9:00 Conversation, development and reading of charts (toward the end of the semester)
9:55 Recess
10:05 Motor activities, including construction and art work. An evaluation and discussion period are included here
10:55 Recess
11:05 Physical Education, followed by health talk, then additional construction, art work or seatwork
12:00 Dismissal

1:00 Reading in groups (by the more advanced children)
1:20 Drill, including writing, correct language usage, and later a beginning of numbers (informal)
2:00 Dismissal

SECOND GROUP

9:00 Opening, flag salute, song, health talk
9:10 Reading by groups. While one group is reading with the teacher, the other groups are working at their seats
9:55 Recess
10:05 Social Studies, discussion, construction, language development, art work
10:55 Recess
11:05 Word study and phonetic drill (the approach is intrinsic)
11:20 Writing
11:40 Physical Education
12:00 Dismissal

1:00 Appreciations, including music, art, reading by teacher, library and story-telling
2:00 Spelling and numbers for more advanced group
2:20 Dismissal

THIRD GROUP

9:00 Music and health
9:15 Social Studies, including discussion, construction and related reading
9:55 Recess
10:05 Reading, including oral and silent, drill and pleasure
10:55 Recess
11:05 Language, including conversation and dramatizations
11:40 Physical Education
12:00 Dismissal

1:00 Skills and drills in spelling, writing and numbers
1:40 Appreciations, including art, poetry, reading for fun
2:20 Dismissal

FOURTH GROUP

9:00 Opening exercises and health instruction
9:10 Skills and drills, including arithmetic, spelling, handwriting
The arithmetic is motivated by games and contests; the words used in spelling are taken from the unit being studied
9:55 Recess
10:05 Reading, including related reading and reading by groups, according to reading levels. Two days a week are given to oral reading to others; one day is free reading in the library; two days are given to work type for those who need it; related reading for others
10:55 Recess
11:05 Social Studies, discussion and construction
11:40 Physical Education
12:00 Dismissal

1:00 Related English. This includes telling stories related to the unit, some story writing, writing in diaries, listening to stories read by teacher
2:00 Recess
2:10 Appreciations, including art, music, poetry
2:50 Free period, including check-up by teacher, King's Klub (citizenship)
3:10 Dismissal
Each Friday from 2:30 to 3:20 this teacher is directing the Nature Club

FIFTH GROUP

9:00 Health and opening exercises
9:15 Social Studies. This time is given to discussion (about one half of the period) and to the construction of articles related to the unit under discussion. While

some children are engaged in large construction, others are making friezes, scrapbooks, scenery, etc.

9:55 Recess

10:05 Continuation of social studies, including English, spelling and handwriting. This period is largely given over to writing in diaries about the items discussed during the earlier period. New words are discussed and spelled. These words are copied into books prepared by the children for further study

10:55 Recess

11:05 Related reading. This includes group and individual reading of books and stories that pertain to the unit

11:40 Physical Education

12:00 Dismissal

1:00 Appreciations, including art, music, literature, poetry and Storybook Club

2:00 Recess

2:10 Skills and drills, including arithmetic, reading, spelling and handwriting

3:00 Citizenship Club

3:10 Dismissal

Each Friday from 2:30 to 3:20 this teacher is directing the Creative Expression Club. If necessary, she substitutes skills and drills for appreciation period on this day

SIXTH GROUP

9:00 Citizenship Club and health instruction

9:10 Social Studies, including discussion and evaluation of work completed and to be done; motor activities

9:55 Recess

10:05 Expression. This includes oral and written English. From the work done during this period the teacher checks spelling and handwriting

10:55 Recess

11:05 Related reading. Each child has at least one book that is on his reading level which treats of the unit under discussion. During this period those children who are in need of remedial instruction in reading are given special attention

12:00 Dismissal

1:00 Appreciations, including art, music, literature and (one day a week) current events and free reading in the library

2:00 Recess

2:10 Physical Education

2:30 Skills and drills. This time is spent on check-up of spelling and handwriting, but the major portion is given to arithmetic

3:10 Dismissal of younger group

3:30 Dismissal of older group
Each Friday from 2:30 to 3:20 this teacher is directing the Sewing Club. When necessary, she shifts drill to first afternoon period

SEVENTH GROUP

9:00 Check attendance, health discussion, bank collections
9:10 Social Studies, discussion of new materials, visual aids, conferences, group activities, evaluation
9:55 Recess
10:05 Related reading, research reading, oral reports, written reports, writing make-believe stories, writing in diaries, dramatizations
10:55 Recess
11:05 Motor activities, construction work, sewing, soapcarving and woodcarving, drawing, etc.
11:40 Physical Education
12:00 Dismissal

1:00 Appreciations, literature with dramatizations, art, music, reading for fun
2:00 Recess
2:10 Skills and drills, English forms, handwriting, arithmetic
Each Friday from 2:30 to 3:20 this teacher is directing the Art Club. She adjusts her program on this day to meet the needs of her group

EIGHTH GROUP (Oldest)

9:00 Opening, flag salute, health talk and inspection
9:10 Social Studies, including discussion, reports, visual aids
9:55 Recess
10:05 Related reading. This includes reading from individual books related to the unit; also drill and silent reading for those needing help
10:30 Related English, including oral and written reports, check on spelling and handwriting
10:55 Recess
11:05 Motor activities, construction, painting, sewing, carving
12:00 Dismissal

1:00 Appreciations, including art, music, literature, dramatizations, storytelling and book review, reading for fun (one day), writing for children's page of city newspaper (one period per week)
2:00 Recess
2:10 Physical Education
2:30 Skills and drills, arithmetic and spelling, handwriting, grammatical drills

3:30 Dismissal
Each Friday from 2:30 to 3:20 this teacher directs the activities of the Stamp Club. She adjusts her program, on this day, to meet the needs of her children

These working programs show that most teachers prefer to place their drill work the last period of the day. This is done so that advantage may be taken of the mistakes and weaknesses noted during the various activities of the day. The teacher remains in the background during all but drill periods, guiding and suggesting but always placing the responsibility for progress on the children.

During the skills-and-drills period the teacher dominates the situation. She feels that in order to get satisfactory results she must be aggressive during this period. In order to economize time she directs the games and contests so that they move along quickly, giving each child an opportunity to participate. When the group drills are over, each child takes up his individual work where he left off the preceding day.

The teacher of the fourth group prefers to have skills and drills the first period in the morning. Her reason for this is that after dismissal in the afternoon she has a better opportunity to check over the errors made during the day. Between dismissal and opening the next day, she diagnoses individual needs and plans to administer the remedy soon after school is convened.

The programs should be considered as representative of a typical day but not an everyday procedure. No mention is made in the programs of the regular Thursday morning assembly period, which always comes at 9:05 and usually continues for 30 minutes. Adjustments have to be made on this day. Whenever a radio program is broadcast that is considered valuable to certain groups, these groups go to the assembly to listen. If one group has completed a portion of a unit and the members want to tell a group in another classroom about it, arrangements are made for the visit.

Although the teachers plan their work, the plans are never so fixed that they cannot be adjusted to meet any necessary situation that may develop. They are constantly watching for clues that will make the work more interesting and more vital to each child. So it

● FIG. 11.—*Circle games are favorites with young children.*

is with the curriculum. The teachers try to choose units that will give the maximum value to their groups in social living, problem solving, thinking, constructing, healthful and joyful living.

HEALTH

A perusal of the programs included on the preceding pages will show that health talks and health "checks" or inspection are given a prominent place. It will be recalled from Chap. 2 that 13.3 per cent of the children in Lincoln were at least 10 per cent underweight at the beginning of the school year 1935–1936, and that 42 per cent were members of families that were on relief. This placed a serious responsibility on the health service of the school. A definite drive was launched in all classrooms to get children to drink milk at one of the morning recesses. Where parents could not buy the milk, it was provided for needy children through the city milk fund.

Nervous, underweight children were assigned to rest periods by the school nurse. Cots were provided for this purpose, and there was supervision of all rest periods. Discussion of proper kinds of foods for a satisfactory diet was carried on in each classroom.

Other health instruction, as outlined in the health course of study, was carried on each day. Wherever it was possible to relate *health* to the unit being studied, that was done. The teachers and school nurse were constantly attempting to improve health conditions of the children. The nurse gave every possible assistance in improving health conditions in the home.

During the year 1935–1936 six children were sent to the county preventorium for observation and special treatment.

All children were weighed regularly. Eyes were tested and the children found to be in need of glasses were urged to get them. Where parents could not provide glasses, they were in most needy cases purchased by the school department.

All children above the second grade were tested with the audiometer. Only six Lincoln children were found to have defective hearing, with two of these the cases were only temporary. Teachers of the other four arranged to seat the children in the most advantageous position in the classroom. One girl, with almost total hearing loss, spends half of each day in a lip-reading class at another school.

OTHER SCHOOL "SUBJECTS"

No attempt will be made here to describe the content or techniques used in developing materials of the various subject-matter fields. Lincoln teachers are becoming more and more child-conscious and less and less subject matter-conscious. However, those persons who are interested in knowing just what content is included and what techniques are used will find the answers given in some detail in the development of the units in Part Two of this book.

4 · Integrative Influences

SINCE the ultimate goal of modern education is "to make human personality," the faculty at Lincoln School feel very strongly that many opportunities should be given each child to develop his special interests under the best possible circumstances. They feel that each child should be given an opportunity to share his experiences with other children outside his own particular classroom group.

Although the areas for each group are large enough to permit wide variation, a modern school should not be made up of eight separate airtight compartments but should be an "integrated school." In order to show how children on different age levels contribute to the unity of the entire school, some of the experiences that help to bring about this integration will be described in this chapter.

CLUBS

The junior high schools, ever since they were organized in San Jose, some 11 years ago, have carried on a successful club program, but until very recently this program did not extend below the seventh grade.

As was noted in Chap. 2, Lincoln School had made a beginning of club work before the school year 1935–1936. There was a special art club and a nature study club that had developed because of great interest on the part of the children. Before school closed in June, 1935, several boys asked if they might start a stamp club. During the first faculty meeting in September the school-club problem was presented. The principal needed but to point out a few of the values to the children when one teacher suggested that a definite club period be set aside each week and that all children in the intermediate grades be given an opportunity to participate in this program.

The suggestion was immediately accepted by the faculty. The necessity of keeping the groups down to a small membership was stressed. Since each teacher had an average enrollment of 36 children in her class, the problem of getting assistance in creating more groups was presented. Primary teachers who were not included in the club program offered their assistance. The janitor, who is very much interested in baseball for boys, offered to organize, with the assistance of the principal, a baseball club. The librarian, who is in charge of the central school library housed in the Lincoln building, offered to conduct a library club if there was sufficient interest.

At the opening assembly, the plan of the club program was explained. The children were told that during the first week they would have opportunity to choose the club that interested them most and that 50 minutes would be devoted to club meetings every Friday afternoon.

The following bulletin was sent to each classroom whose members were to participate in the club program so that those children who did not already have a definite interest in some club could better understand what would be done in each group.

Art Club

The Art Club will not only give you a chance to draw and paint the things you like but it will give you an opportunity to experiment with crafts. You may like to work with tin, weave with raffia, make toys, carve wood and soap or make block prints.

Creative Expression Club

This club will write and present plays for our own amusement and possibly for the entertainment of the rest of the school. The plays will include dancing, singing and poetry.

Nature Study Club

We shall show slides and film strips on nature topics. We shall make collections of flowers, rocks and other nature items. We shall take a few hikes to get materials.

Stamp Club

The Stamp Club will be in charge of its president, who will be responsible for programs. These will include talks about stamps by members, stamp recognition games, contests, exhibits, exchange or trading activities. We hope to have several members of the Philatelic Club address the group during the year.

Sewing Club

The girls choosing this club may have sewing of their own to do, which they may bring from home. For those who do not have any work started, opportunity will be given to learn how to make a quilt. When completed the quilt will be disposed of according to the wishes of the group.

Library (Reading) Club

The Library Club will give you more time for "reading for fun." We shall have some interesting talks from visitors and shall take trips to other libraries. The club members may also choose some activity to make Lincoln School Library more attractive.

Boys' Baseball Club

The Boys' Baseball Club will meet each Friday afternoon during the club period on the baseball grounds. The members of the club will be divided into two teams and each boy will be given an opportunity to play.

Girls' Athletic Club

If there are enough girls interested, we shall organize a Girls' Athletic Club that will meet on the playground during club period. We shall play games of various sorts including baseball, volleyball, kickball and relays.

When the vote was taken, sufficient interest was manifest in all suggested clubs except the Girls' Athletic Club. The Nature, Stamp and Baseball clubs were monopolized by the boys. Only girls registered in the Sewing Club. All others contained boys and girls.

Nature Club

The Nature Club had been organized the preceding year; most of the old members voted to remain and several new recruits were added. This club was quite active during the entire year and accomplished many things that had definite value for the whole school. They obtained funds through candy sales to purchase a new lense for a film-

● FIG. 12.—*Members of the Nature Club stock and take care of the school aquarium.*

strip projector that had been given the school. This machine was used at nearly every meeting of the club. When an aquarium was purchased for the school, the Nature Club took over the responsibility of stocking and caring for it. They made collections of flowers, shells and leaves which they placed on exhibit in the library and in a glass case in the upper hall, where all might see.

A stenographic report of one of the meetings of this club is given to show the variety of topics discussed. The report also served as a means of evaluating oral English instruction. This group is made up of nine- to thirteen-year-old boys ranging in school levels from low fourth to high sixth grades.

Nature Club Stenographic Report

PHILIP. Will the meeting please come to order? We'll have the roll call. (*Calvin called the roll.*)

PHILIP. Has anyone anything interesting to tell?

JIMMY. Last Saturday afternoon my Dad and I went fishing. We only caught one fish and the other man caught one, but we let him go after we had him in our fishing basket for 15 minutes. We put him back in the water. Then it dawned on me, "Why didn't I bring him home for Nature Club?"

PAUL. Last Sunday I went down to Almaden. I ran clear down where the water is in the dam and I found some pupa cases.

TEACHER. What color were they?

PAUL. Sort of a brown.

TEACHER. It's hard to say what they were. Did you bring any home to watch?

PAUL. No.

BILLY. When I was walking in the back yard I saw a Sphinx caterpillar on a vine. He had white stripes on him and I brought him to Mrs. Rhodes.

PHILIP. He died yesterday. Mrs. Rhodes said he was parasitized.

CHARLES. Last Saturday I was walking through a field out here in the golf practice course and we saw a spider but we couldn't get near it. Every time we came up it kept getting farther away. My uncle said he would try to get it for me. I think it was a trap-door spider.

LOUIS. The other night when my mother and I were in the kitchen doing dishes we saw a spider. It was about this big and it was brown and white.

PHILIP. It may have been a male black widow, or a young one. When I was getting my three little guinea pigs some clean water, a cat got into the pen and the mother and father went right out and started to fight the cat. There was some blood around, but the cat didn't hurt them at all. The mother and father stood side by side and when the cat went after the mother, the father went after the cat. When the cat went after the father, the mother would go after the cat.

CALVIN. This caterpillar that we caught last Saturday has turned into a pupa over the week end. I didn't see it turn, though.

TEACHER. It usually takes several days for them to spin the cocoon. This one picked the week end when we couldn't see it. When I looked at it first on Monday morning I could see the green in it. You can't see any green there now. Many moth caterpillars change to pupae without a cocoon. All caterpillars don't have cocoons. Do you remember the kind of moth that is going to come from this?—We had two kinds here, the Polyphemus and the Sphinx. This will be a very beautiful one. Its lower wings will probably have little cellophanelike windows in them.

PHILIP. I know. It will be a Polyphemus.

CALVIN. How many members of the Nature Club listened to any nature talks that have been coming over the radio? Look in the newspaper to see if there isn't a nature program on the air. You could tell about it at our next meeting.

GEORGE (*a new boy*). Has a cat really got nine lives?

TEACHER. That's a good question. Maybe one of the boys can answer it.

JIMMIE. We saw a cat the other day. An automobile ran over it but it wasn't hurt at all.

PETER. Up on my Dad's ranch we had a cat that was drowned and it was lying on the ground. When we came back two hours afterward it wasn't there.

PHILIP. I'll bet it wasn't really drowned and it got all right.

RALPH. The other day when my brother and I were going along on our bikes, we saw a cat in the street dead. Its head was squashed.

TEACHER. Well, does a cat really have nine lives?

CALVIN. They say that cause a cat can get out of the way in a hurry and not get hit.

JIMMY M. You know, I was walking across the street in the night a couple of weeks ago and a truck came along and I saw a gray kitten, but it was nearly grown. This truck came along and hit it. It rolled over and got up on its legs and went on.

GEORGE. I guess the reason people say a cat has nine lives is because it can get out of trouble easier than most animals.

RICHARD. I read in that book Mrs. Rhodes loaned me about all different kinds of animals. It says the ants are more like human beings. They have little stores and everything.

WAYNE. It was about two days ago—I was in my back yard—there were ants with wings on them and they were coming out of the ground.

TEACHER. Yes, there is a winged antlike insect, a termite.

RALPH. One time I saw a lot of those ants with wings on them.

JIMMY. Do those ants with wings on them come out after the rain?

TEACHER. I don't know. Let's find out about that. By the way, I have all of those science books for you boys. Those of you who are interested in finding out about the ants may stay this afternoon and I'll help you.

CALVIN. It's a lot of fun to watch these ants with wings come out of the hole. They wiggle around and all try to get out at once. I just happened to get a water gun one day and I shot at them.

PHILIP. Boys, just tell the interesting things now and then we are going to see a new film strip.

RICHARD. Here is that book I was telling you about.

TEACHER. I think one of the most interesting stories in this book is about bats. They say "you are as blind as a bat." Most people don't know that bats can see poorly, but fly in the very darkest places because they are so sensitive to the currents of air caused by the smallest objects. You

● FIG. 13.—*Two members of the Art Club hang one panel of the "Life of Lincoln" series they have made.*

read the story and you'll be greatly surprised about the tests that have been made to find out how well they can avoid any object no matter how small, nor how dark the place.

ROBERT. Since Jimmie and I cleaned the aquarium it's been sorta cloudy. So, Mrs. Rhodes, and I thought if we would take the big plant out it would make the water better. Can anyone bring any snails? (*A few boys indicate their willingness.*)

PHILIP. Now we shall have the film strip on moths. (*Film is shown.*)

PAUL. What are those things that go around lights?

TEACHER. They are moths. A butterfly usually flies in the daytime and a moth usually flies around at night.

CALVIN. There are just thousands of them out at Graham Field.

TEACHER. They are probably oak moths because there are oak trees out there.

WAYNE. There is a lamp shade over at my friend's. Every night he turns the light on and I look on the lamp shade, I can see little eggs.

TEACHER. They may be just fly specks. Take a razor and scrape a few of them off. Bring them and we'll look at them under our microscope.

PETER. Up on Mt. Hamilton at our cabin I can get thousands of those oak moths.

HARVEY. I didn't tell you about the pupa case I saw. A great big caterpillar came out of it. I mean moth. It was just fluttering its wings when I saw it.

TEACHER. How many ways can we tell a moth from a butterfly?

RALPH. The butterflies have knobs on the ends of their feelers or antennae and a moth has furry ones.

JIMMY. A butterfly closes its wings when it lights and a moth doesn't.

TEACHER. What are the stages of life of a moth and a butterfly?

SEVERAL ANSWER. First the eggs, then the baby caterpillar, then the cocoon and finally the butterfly.

At the end of the moth discussion, the teacher explained how to make an insect killing bottle, a spreading board for insects, a flower press, smoke prints, spatter prints and insect nets.

Art Club

During the first part of the year the Art Club decided to make a series of panels for the assembly illustrating the various periods in the life of Abraham Lincoln. Sixteen members of the club wanted to work on this project so it was decided that they should work in pairs, two children to each panel. Partners were chosen and research was started to determine which scenes of Lincoln's life were most significant and appropriate for assembly decoration.

The eight panels chosen included "The Birthplace," "Lincoln's Boyhood" (studying before the fire), "The Wood Chopper," "Walking through the Woods," "On the Flatboat," "The Debates," "The Gettysburg Address," "At Ford's Theater." First small drawings were made on paper; when these satisfied their creators they were enlarged to the size necessary to fit the muslin panels. These completed panels measured 36 by 48 inches. They were made of poster paint. A strip of half-round molding was attached to the top and bottom to hold them in place.

All club members were anxious that the panels be completed and presented to the school at an assembly before the high sixth class was graduated at the end of the first semester. Of the 18 persons who made the panels, eight were from the high sixth, four from the low sixth, three from the fifth and three from the fourth grade.

During the second half of the year, emphasis was placed on crafts rather than drawing. Many articles were made of tin and block prints were made from old automobile inner tubes. Some of the children made toys while others carved with soap and wood.

Creative Expression Club

The Creative Expression Club emphasized dramatics and dancing. They originated many interesting dances and wrote several short plays. Their first appearance before the entire school came at Hallowe'en, when they gave an appropriate play. The performance was well staged and most enthusiastically received by the audience. The climaxing activity of the club was the production of an hour-length play they had written as a group. It was called the *Four Seasons* and included important days and holidays around the calendar. The action, properties, costumes and dances originated with the group.

Baseball Club

The members of the Baseball Club were most enthusiastic throughout the school year. When the days were too bad to meet on the field, the boys worked out plays on a blackboard. They learned how to figure their own batting averages, a good lesson in percentage that was entirely "painless" and "functional." Many of the younger boys signed for the club and had opportunity to play with some of the larger, more experienced boys. This experience would not have developed under ordinary circumstances. Both the older and younger boys benefited by it. There were enough members for two teams and games were played regularly. Good sportsmanship was emphasized and the baseball boys prided themselves on emulating this valuable characteristic. They did not hesitate about telling other boys what to do and what not to do on the athletic field.

Stamp Club

The Stamp Club had an exhibit of stamps for the entire school. Members of the club explained the exhibit and told how to start a collection. Several members of the local Philatelic Club visited the school and talked to the club members. Two members won awards for their collections at the annual Hobby Fair conducted by the Junior Chamber of Commerce for the entire city. These boys have started a hobby that brings them joy today and may give them much satisfaction in later life.

Library Club

The Library Club decided early in the year to take the responsibility of providing exhibits that might be displayed on the exhibit case and bulletin boards in the library. They canvassed the other clubs and members of the faculty, then arranged an exhibit schedule. Some of the exhibits displayed during the year included:

1. New books received during the summer. The exhibit contained an attractive display of book jackets and some books.
2. Nature Club. An exhibit of spiders, butterflies, cocoons.

3. Book Week. Book jackets, games, illustrations of book reports.
4. Art Club. Thanksgiving table, with decorated paper cups, saucers, plates, etc.—a lesson in design and arrangement.
5. Telephone. Early instruments borrowed from the telephone company, information about Bell, first telephone conversations.
6. February birthdays. Pictures and brief biography of noted persons born in this month.
7. Hobbies. Children's collections, including stamps, shells, pictures, airplane models, doll furniture.
8. Christmas. A small tree, pictures of the Christ and table decorations in silver and blue.
9. Samoan Islands. Exhibits of articles received from the junior Red Cross in return for Christmas boxes sent by Lincoln children to the islands. The exhibit included an outrigger canoe, grass skirts, strings of beads, carved wood, photographs.
10. Old books. A few rare volumes were included in this exhibit. Most interesting to the children were readers, spellers and arithmetics of 50 years ago.

The members of this club learned how to repair books and made minor repairs to the library volumes. They had sufficient time to "read for fun" and to suggest books for others to read. They enjoyed visits to school libraries in other parts of the city and invited members of other schools to see their exhibits.

Sewing Club

The Sewing Club followed the program suggested in the first club bulletin. Several girls had started sewing at home. They brought their work on Friday afternoons. Several others became interested in samplers because they had been studying a unit that included colonial customs. These girls made sampler patterns, then transferred them to cloth and cross-stitched the patterns. Still other members of the group investigated the many quilt patterns, brought scraps of material from home and made small quilts for their dolls. Since the girls were more interested in doing this, the director did not insist that they make a large quilt.

The club at Lincoln School is a definite asset. It does more than help to develop special interests on the part of individuals, it causes the members of the various groups to want to share their interests and accomplishments with others. The club is a strong factor in unification of the entire school.

ASSEMBLIES

Primary assemblies are held each week by the three younger groups. These assemblies consist of songs, in which all participate, and "surprise" numbers. These include dramatizations, numbers by the rhythm band, solos and dances. The primary groups had charge of the Thanksgiving program for the general assembly. This was a real thrill for the younger groups as well as a source of much enjoyment for the older children. Only on rare occasions, when a program had been arranged that would appeal to six-year-olds as well as to thirteen-year-olds, did the primary groups participate in the general assembly.

General assemblies for the five older groups were held every Thursday morning. Each assembly opened with the singing of the first verse of "The Star Spangled Banner" and the giving of the flag salute. This general assembly is primarily for *singing* but each week at least one special number is arranged.

A teacher directs the singing but children are constantly called upon to make suggestions as to what numbers are to be sung. There is always an air of excitement until the special number is announced, for that is kept as a surprise. The surprise numbers are limited to 10 or 12 minutes. When a number, such as the culmination of a unit, requires a longer period of time, a special assembly is held. This arrangement does not rob the children of their opportunity to sing together once a week.

Some of the special numbers and special assemblies are listed to show the variety of programs presented.

1. James Whitcomb Riley programs of biography and poems.
2. Concert by WPA orchestra of 26 pieces.
3. Spanish fiesta by third-grade group.
4. Radio play and broadcast as culmination of communication unit.
5. Amateur hour, including accordian solo, song, acrobatic dance.
6. Thanksgiving play by primary groups.
7. The story of architecture, culmination of study of this topic.
8. A Viking play, written and produced by the group that had been studying Vikings and other early explorers.

9. The Scandinavian Countries, given as a culmination and graduation program by the high-sixth group.
10. Discovery of Gold, a culmination of study of California in '49.
11. A professional puppet show for the entire school.
12. A circus, the development of a study of wild animals.

THE CHRISTMAS PAGEANT

Perhaps one of the best examples of cooperative enterprise came with the preparation and presentation of the Christmas Pageant. Each of the five older groups had been studying about different sections of the world. During the period immediately preceding Christmas they made a special study of the Christmas customs of the people they had been discussing. As each group gathered information, they discussed ways of presenting this information that would be interesting to the remainder of the school. Soon five presentations were under way.

Since continuity seemed desirable, it was decided to have a short prologue during which a modern American boy and his sister discussed Christmas and what it might be like in other countries. During the conversation, the Spirit of Christmas appeared and promised to take the children to see what happens in other countries. These three characters were seated in front of the curtain and, through the questions of the children and explanations of the Spirit, gave the necessary sequence.

In order to tie the various scenes more closely together and further the Christmas Spirit while scenes were being changed, 16 boys and girls were dressed in black robes with tagboard collars and cuffs. These young people were chosen because of their ability to sing. Some attention was given to size, and no more than four were taken from any one group. The "vested choir" appeared in a processional at the beginning of the program. They sat in front of the stage and sang carols while the children and the Spirit were traveling from one country to the next.

The youngest group, third-graders, presented "Christmas in Germany." With the exception of singing two carols in German off stage, this presentation was entirely in pantomime. The children portrayed the old German legend of the little child who was befriended by a German family on Christmas Eve. Later the child appeared and presented the first Christmas tree to the children.

The next group had been studying life in early California, so they decided to give a Spanish Christmas. The "Noche buena," as it was called, depicted holiday customs peculiar to Spain and Mexico. Spanish dances and carols were given, the *piñeta* was hung and broken, the candles were lighted and, finally, the group started for church after the midnight chimes had rung.

Another group had been studying early explorers in the United States. Since their most recent studies had been about the French, they searched for materials about French Christmas customs and called their presentation "Noël française." The children, dressed in smocks and berets, sang French folk songs, danced folk dances and put their wooden shoes before the fireplace. While they slept the crèche that was in the corner of the room came to life. The wise men, the shepherds, Mary and Joseph were all there. When the children awoke, the shoes had been filled.

The study of castle life lead naturally to "Christmas in Merrie Old England." The scene was the banquet hall in a medieval castle. The lords and ladies were present, as were pages and courtiers. Songs and folk dances were enjoyed. The walls were decked with holly. Servants brought in the boar's head, roast goose, beef pie and plum pudding. Serfs dragged in the yule log for the fire. Trumpeters announced the various phases of the celebration.

Since the oldest group had been studying the Mediterranean countries, they decided to arrange tableaus depicting the first Christmas. While these tableaus were being arranged and displayed, members of the class recited sections of the various Gospels that were illustrated by the tableaus.

At the conclusion of the final tableau, the audience was asked to join with the choir in singing "Silent Night," after which the choir sang as their recessional "Joy to the World."

Since the school auditorium is limited to a seating capacity of 300, two performances were given. The morning performance was presented for the children so that those who were not participating might see the entire program and those who were presenting the various scenes might have a chance to see the remainder of the program. The evening performance was given for parents and friends. The children were asked not to come at night so that their seats might be occupied by some person who had not had an opportunity to see the program.

Less than a dozen children came for the evening performance and they came only because their parents could not leave them at home. The auditorium was filled to capacity at the second performance and parents joined in singing at the conclusion of the program.

In all, 179 out of a possible 201 children of the five older groups actually appeared in the presentation of the Christmas program. The other 22 made their contributions in the painting of scenery, making of costumes and building of stage properties such as fireplaces, crib and manger. Several boys acted as ushers for the evening performance.

Perhaps the most interesting group of workers was the stage crew working under the direction of the school custodian. The stage in the school auditorium has but few of the usual facilities of a stage. The platform is shallow, entrances can only be made from the sides and there is no space above the proscenium for the hanging of scenery. The school owns no scenery and has but a scant supply of funds for the purchase of materials. This necessitated the making of scenery so that it could be placed on the stage quickly and easily, while at the same time it must not occupy much storage space. Cooperation was the keynote of the handling of scenery and properties throughout the two performances. The boys were organized so that each person knew what to do after each scene. He must work quickly and accurately, keeping out of the way of others. He knew that he was responsible to a large degree for the success of the performance, so that the audience would not become restless because of long waits. He also knew that with all his work he would not be seen by the audience. His sole reward was the satisfaction of knowing that he had done his work well. Perhaps the highest tribute that could be paid to these workers was that statement made by one of the parents after the program, "I didn't realize the show lasted an hour and a half. All the scenes were so interesting and we didn't have to wait between acts like you usually do at school or church shows."

CASTLE LIFE

Since an illustration of a composite play prepared and given by one of the primary groups has been included in an earlier chapter, one written by an older group and given to the general assembly as a culmination of their study of castle life will show the type of production of which children are capable in the fifth or sixth grades of an elementary school where initiative, personal responsibility and creative abilities are deemed worthy of development.

The scenery for this play was made of butcher paper and fastened to the rear wall of the stage. More butcher paper, thumbtacked over screens, provided stage wings. The children designed and drew their own backgrounds.

As the performance was about to begin, a member of the group dressed as a lady of the King Arthur period appeared before the curtain and said, "This morning we are taking you back one thousand years to a castle in Merrie Old England. Those were the days of ladies so fair and knights so bold.

"We shall follow the career of two little boys who lived in Camelot Castle. It was their ambition to become knights like their heroes, the knights of King Arthur's Round Table."

Life in the Castles of Long Ago

Scene I. Camelot Castle.

Characters. LADY ELAINE, LADY ALICE, ladies of the castle.

LANCELOT, GALAHAD, two boys.

SIR GODFREY, SIR HERBERT, lords of the castle.

The ladies are seated. The boys are on the floor at the ladies' feet.

LADY ALICE. There is so much excitement in the castle today. Everyone is dashing around getting ready for the tournament.

LADY ELAINE. Do you know who is coming?

LADY ALICE. King Arthur is coming with his Knights of the Round Table.

LADY ELAINE. I hear horses' hoofs on the drawbridge now. (*Looks out window.*) Here comes King Arthur.

LADY ALICE. Isn't he handsome?

LADY ELAINE. See the brave and strong knights. How the gold names on their shields shine.

● FIG. 14.—*Not one Round Table, but many.*

Lady Alice. I wonder why their names are on their shields.

Lady Elaine. Only those who do brave deeds can have their names engraved in gold.

Lady Alice. It seems as if all of King Arthur's knights have done brave deeds.

Lancelot. Mother, when I grow older, will I be able to become a knight?

Galahad. Mother, I want to become a knight also. How much longer must we wait before we can become pages?

Lady Elaine. When you are both seven years old you may be pages.

Lancelot. Come along, Galahad, let's take our bows and arrows and practice archery.

Lady Elaine. Sir Godfrey and Sir Herbert went hunting today. I hope they returned in time to greet King Arthur.

Galahad. Did they go hawking with your pet falcons?

Lady Alice. Yes, they did and I hope they bring big bags of blackbirds for the feast.

(*Enter Sir Herbert and Sir Godfrey.*)

Sir Herbert. Have the boys behaved?

Lady Alice. They talk only of becoming pages. They will be seven years old soon.

Sir Godfrey. We shall be lonesome without them. Come now, join the dance in honor of King Arthur.

Scene II. Camelot Castle, in the Ladies' Tower, several years later.

Characters. Lady Alice, Lady Elaine, two boys.

Lady Alice. Our two boys are now seven years old and at last they can become pages.

Lady Elaine. Yes, Sir Herbert has arranged to send them to Blarney Castle to begin their training.

● Fig. 15.—*The Vigil, preparing for the knighting ceremony.*

LADY ALICE. I'm very proud that they can go there. (*Calls the boys.*)

Enter boys.

LANCELOT. I know why you want us. We can become pages now.

LADY ELAINE. You guessed right. Tomorrow you are to leave for Blarney Castle. You will serve Lady Guinevere as her page for seven years.

GALAHAD. Why must we go there?

LADY ALICE. You will receive better training there for your mothers will not be near by to spoil you. Do you know what your duties will be?

LANCELOT. We shall have to do the same things that your pages do. We shall have to serve the lord of the castle and the ladies at the table, and run errands for them.

LADY ELAINE. You will have to learn to stand straight and not lean against things. If anyone gives you anything, you must receive it kneeling and thank him nicely.

LADY ALICE. The lady of the castle will teach you to read and write on a wax tablet with a stylus. If you do well, perhaps you may use a pen and parchment.

LADY ELAINE. You'll learn to ride, too, and train your horse to obey your commands. You'll have to learn to leap ditches and high walls on your horse, and spring into the saddle without touching the stirrup.

GALAHAD. Do you suppose we can catch our own hawks and tame them so that we can go hunting with our master and mistress?

LADY ALICE. I'm sure you can, for we let our pages do that. Get ready now, for you have a long ride with an early start.

Scene III. The Morris Dance. An old dance that was simplified by the group and danced by eight girls.

Scene IV. Blarney Castle, in Lady Guinevere's tower, seven years later.

Characters. LADY GUINEVERE, LANCELOT, GALAHAD, and SIR GAWAIN.

LADY GUINEVERE. Galahad, you and Lancelot have been my pages for a long time now. How old are you?

GALAHAD. I am almost fourteen.

LANCELOT. I am almost fourteen, too.

LADY GUINEVERE. Very soon you will become squires. You have both been faithful pages. You have learned to read and write. I am very proud of the fine writing you have learned to do on parchment. So many boys can write only with the stylus on wax tablets.

GALAHAD. Our riding master told us that he too is proud of the way we learned to ride our horses.

LANCELOT. And hasn't hunting been fun? And wrestling, too. I still have a lame back from that last wrestling lesson.

GALAHAD. Remember what happened to me when we had that jumping contest and my feet slipped out from under me? I didn't think I ever wanted to sit down again.

LANCELOT. I didn't think I could ever learn to spring into the saddle without touching the stirrup. Now I can almost do it with my eyes shut.

LADY GUINEVERE. Don't forget all I have told you about being chivalrous, brave and truthful.

GALAHAD and LANCELOT. Yes, Lady Guinevere.

(*There is knocking at the door.*)

LADY GUINEVERE. Please admit the one who knocks.

GALAHAD and LANCELOT. With pleasure, Lady Guinevere. (*At the door.*) It is Sir Gawain.

(*Enter Sir Gawain.*)

LADY GUINEVERE. Ah, it is Sir Gawain.

SIR GAWAIN. I have a surprise for your two pages, Lady Guinevere.

THE BOYS. What is it, Sir Gawain?

SIR GAWAIN. I have decided that you are now ready to become squires.

THE BOYS. Thank you, oh, thank you. I am so happy. I don't know what to say. Thank you, Lady Guinevere, for all that you have done for us.

Lady Guinevere. All that I ask is that you remember to be faithful, courteous and honest.

The Boys. We shall never forget your kindness and what you have taught us.

Lady Guinevere. Then go. Learn to be good squires and may fortune smile upon you always.

The Boys. We shall do our best to please Sir Gawain.

Sir Gawain. You must do the very, very best that you can to become knights. Then your mothers and fathers will be proud of you. Unless you do your duties well while you are squires, you cannot become knights.

Scene V. Blarney Castle, in the Great Hall. Seven more years have passed.

Characters. Lancelot and Galahad. They are polishing armor.

Lancelot. I've rubbed and rubbed. I'm sure I can't see any more dull spots.

Galahad. Hurry up. You know we still have a stack of shields and swords to polish.

Lancelot. We used to think that learning to be a page was hard work but this business of learning the duties of a squire has kept us on the jump.

Galahad. I wonder why squires have to make beds, help the lord of the castle dress and wait on tables. That's girl's work.

Lancelot. Well, it has to be done so we have been doing it for almost seven years now.

Galahad. Hasn't it been exciting to follow Sir Gawain to battle? I was afraid to sleep at night for fear someone would steal his armor out from under our noses.

Lancelot. Do you remember the time the robber baron knocked him off of his horse? We had a struggle lifting him inside of 60 pounds of armor up on his horse again.

Galahad. I wonder if Sir Gawain thinks we are worthy to become knights. He praises us now and then but I can't help but wonder.

Lancelot. I wouldn't worry if I were you. If it hadn't been for you coming to his rescue and frightening the robber baron away, Sir Gawain might

● Fig. 16.—*Rise, Sir Knight.*

not have been with us now. He owes you his life. There comes Sir Gawain now. I hope he didn't hear us.

(*Enter Sir Gawain.*)

Sir Gawain. Here are my faithful squires at work again. I have come to tell you now that you are twenty-one years old. Tomorrow I shall dub both of you knights in the presence of all those whom you have served so faithfully.

Galahad. Sir Gawain, I'm so happy that I can't talk.

Lancelot. I must pinch myself. Is it really true? At last, my dream has come true.

Sir Gawain. You must spend tonight in prayer. You will be dressed in white, which means purity, and red, meaning the blood you must be ready to shed to defend the church. You must wear black shoes, which are reminders of the soil to which you must return when death comes.

Scene VI. Blarney Castle, in the Chapel. The Vigil, the night of prayer before the knighting ceremony.

Characters. Squire Lancelot and Squire Galahad.
This scene is a tableau. Armor is placed on the altar, lighted candles are on the altar. Lancelot and Galahad are kneeling, dressed in white with red scarf.

Scene VII. Blarney Castle, the courtyard.
The next day; a dream come true, the knighting ceremony.

Characters. Sir Gawain, Galahad, Lancelot, knights and ladies.

Sir Gawain. Squire Galahad, Squire Lancelot—you have done your duties nobly. You have spent fourteen years of your life in this castle. You have proven yourselves worthy of becoming knights. Kneel, squires. Galahad, Lancelot, do you promise to defend the church, to be brave in battle, to be faithful, to respect and defend the weak, to be courteous to the ladies, to be humble, to be generous and to be always right and just?

Galahad and Lancelot. I promise.

SIR GAWAIN (*to Lancelot*). In the name of God and St. Michael and St. George, I dub thee knight. Sir Lancelot, be valiant, brave and loyal. (*Strikes him on shoulder three times.*) (*To Galahad.*) In the name of God and St. Michael and St. George, I dub thee knight. Sir Galahad, be valiant, brave and loyal. (*Strikes him three times on shoulder.*) Rise, Sir Knights. (*Sir Gawain places armor on the knights as the curtain falls.*)

The above play is far from perfect but is a fair sample of what can be done by ten-, eleven- and twelve-year-olds. The play was written and rewritten several times. The number of scenes was cut from ten to seven, and it was necessary to add dialogue so that each scene would not be too short. The teacher suggested that some name other than "Blarney" Castle is used, but the children insisted that they wanted Blarney, so Blarney it remained.

TRAFFIC SQUAD

Another integrative influence is the school traffic squad. When a boy becomes ten years of age he may be eligible for the squad. First of all he must apply for membership, secondly he must have written permission from his parents, in the third place his schoolwork must be of such quality that he can afford to be absent from the classroom when the occasion arises and the fourth and most important requirement is that the boy must be entirely dependable and capable of carrying out instruction *without supervision.* Not every boy who meets the above requirements may become a member of the squad at once, for the number is limited to 20. This limitation was set because it was felt that when a boy actually becomes a member of the squad he should have regular duties to perform. At present the numbers of such duties do not seem to warrant including more than 20 boys on the active list of "traffic officers."

Cooperation of the school and home are required for this enterprise. The parents understand it is something of an honor for a boy to be placed on the squad and they recognize that the boys are responsible to a high degree for the safe arrival of their children at school and at home. In order that the school authorities may be sure they have the consent of the parent for the boy to participate in traffic-squad activities, the following form must be signed and filed at school before the boy can be assigned to duty.

Date ____________

I am willing for ________________________________
to act as traffic officer at Lincoln School during the present school year. In giving my consent I recognize that the school will properly instruct him in his duties as a traffic officer but that the school cannot be held responsible for any accidents.

____
Signature of Parent

As soon as a boy has been assigned to the traffic squad he receives a star bearing the words "San Jose School Traffic" and is given a red "trench" cap, which he wears only when on duty. Large circular metal hand signs, bearing the word *Stop* in white letters on a field of red, are kept in the school basement and must be used by all boys when on duty at any of the assigned street corners.

The duties of the traffic boys include the stopping of rolling traffic at corners near the school when there are children at the corner to cross. The boys are instructed never to raise their *Stop* signs when there is a car within a half block of the intersection. Children are instructed to wait at the corner till the traffic officer signals for them to cross.

The boys go on duty 20 minutes before school convenes for morning and afternoon sessions. They leave their respective rooms 2 minutes before dismissal, so that they may be at their assigned corners before the children arrive. A squad of 20 makes it unnecessary for every traffic boy to be on duty at each intermission, hence no boy need be absent more than 4 or 5 minutes from his classroom under ordinary conditions.

Other duties include escorting groups to points of interest when they are on field trips and conducting ill children to their homes when the school nurse is not available. The traffic boys also, whether they are "on duty" or not, take care of most of the management of the playgrounds. Fights are stopped or avoided, unnecessarily rough play is banished, and bullying is "nipped in the bud" by the traffic boys.

At a meeting of the school representatives the traffic boys were asked to assist in keeping the school grounds free from papers. Each

● FIG. 17.—*A school traffic officer on the job.*

boy agreed to be responsible for the appearance of the school grounds one day each month. He sees to it that all persons who eat their lunches on the school grounds place their papers in the proper receptacles. Just before the end of the noon intermission, he makes a survey of the school grounds and gathers all loose papers.

The captain of the San Jose Traffic Squad visits the school each semester and instructs the boys in their duties. Through the cooperation of one of the local theaters, he gives a theater party to all traffic boys each spring. The boys also participate in Armistice Day and other community celebrations by assisting the regular city traffic officers.

GROUP REPRESENTATIVES

Although the children have always had a part in the control of their own classroom and the corridors, not until this year did they select representatives to meet with those chosen by other groups to discuss the welfare of the entire school. In all rooms the representatives were chosen by teacher and children. Only representatives in the five older groups were selected. Since the choice of these representatives must be made early in the school year and since it was a new experience for the children some mistakes were made at first. Two children who had been chosen had to be replaced by others after they were found to be unsatisfactory representatives of their groups. The reasons for the changes were that the two chosen could not accept the responsibilities placed upon them and in one case the person chosen was reported on several occasions by a traffic officer as being unwilling to cooperate on the playgrounds.

Near the end of the third week of school a personnel was chosen that remained constant throughout the school year, except for a change necessitated at the end of the first semester by the graduation of one member. The personnel, as it finally developed, consisted of a boy and girl from each of the two older groups, one boy from each of the two middle groups and a girl from the youngest group.

The representatives met with the principal before school every Thursday morning, immediately before assembly. This time was chosen so that any announcements of policies discussed at the meetings could be made at the assembly. This arrangement was a satisfactory way of developing pupil government and at the same time giving the principal an opportunity to direct it. Teachers and children were asked to send in suggestions for improving conditions at Lincoln so that the representatives might discuss them and make recommendations.

One of the first suggestions was that there were too many interruptions in the classroom by children coming to the door inquiring about lost or found articles. The representatives decided to establish a "lost and found" department. Arrangements were made with the school clerk whereby any person finding an article might leave it at the office. Any person inquiring for found articles must wait until Tuesday morning before school, when one of the representatives would be in the office to take care of requests. It was decided that if an individual had lost any article of wearing apparel, he might call for that at the office any afternoon at dismissal. As soon as the "department" was established, teachers reported a decided drop in interruptions. The representative chosen to take care of this department, a boy from one of the middle groups, stated at the meeting before Christmas that there were a number of articles on hand that had not been called for. He asked that he be permitted to announce in assembly that there were a number of articles that had been in the department for weeks and that, if they were not called for immediately, they would be turned over to one of the local service clubs for distribution at a Christmas party for underprivileged children. The permission was granted. A number of articles were claimed but there were some remaining and the director of the lost and found department was greatly pleased to turn over a dozen articles to the club for distribution at their party.

One day the school department librarian fell in one of the corridors and broke her leg. The representatives voted to ask for small contributions from the children to send flowers while she was in the hospital. The announcement was made by the president of the representatives and the response was immediate from children and teachers. A short time later, the president was delighted to read to the assembly a letter of appreciation from the librarian.

Complaints came to the representatives that there was too much running on the stairs. After the group discussed this, each representative told his room group about the complaints and emphasized the dangers of running on stairs as well as the unnecessary disturbance.

Although these talks did not entirely eradicate running on the stairs, the amount was perceptibly reduced and all children became conscious of correct procedure in the school corridors and on the stairs.

The representatives discussed the untidy appearance of the school grounds at the end of each noon intermission. Attempts were made through classroom talks to eliminate the "waste-paper nuisance" from the school grounds. A representative was assigned the task of solving this problem. For a time he spent most of his noon hour locating the "culprits," but even after the thoughtless persons who had been throwing away their lunch papers instead of putting them in the proper receptacles had been apprehended, there were still some papers in the yard that could not be "tagged" to any boy or girl in school. For a time the representative gathered these papers himself. Soon he hit upon the scheme of getting help from the traffic squad. By an arrangement with the captain of the school traffic squad, this group met with the representatives and worked out a plan whereby one traffic officer is reponsible for the school grounds one day each month and that nuisance has entirely disappeared.

PAPER DRIVE

Automobiles, push wagons and scooters filled with old papers and magazines—children and parents were bringing them to school for the annual paper drive. The funds obtained from the sale of the old paper were to be the school's contribution to the Community Chest.

A "quota" of $25 had been set for the school to raise. Since paper was selling at $4 a ton, the children figured that more than 6 tons must be gathered. A quota or goal was set for each group, a larger quota for the older children, and they all set out to gather papers. This drive is an annual affair, and the parents had been saving papers for several months.

As the older groups reached their quotas, they immediately started assisting the smaller children to gather the expected amounts. Through this close cooperation of home and school, group and group, the drive was completed in two days. When all papers had been weighed the total reached 8½ tons. This was accomplished in a district where many homes do not subscribe to magazines or daily papers. The drive was conducted simultaneously with other school paper drives throughout the city so that the children were limited to the district in which their school is located.

During the Community Chest drive, the president of the school representatives was delighted to attend a "report luncheon" with one of the teachers and report to the assembled workers that Lincoln School had more than reached its quota for the Chest. Incidentally, two of the Chest agencies, The Salvation Army and one of the day nurseries, are located within the territory served by the Lincoln School.

THE LINCOLN SCHOOL NEWS

Another factor that assists greatly in tying the various groups of the school together is *The Lincoln School News*, a paper started by one of the older groups while they were studying Spain. The paper became so popular that the group continued publishing it every three weeks throughout the school year.

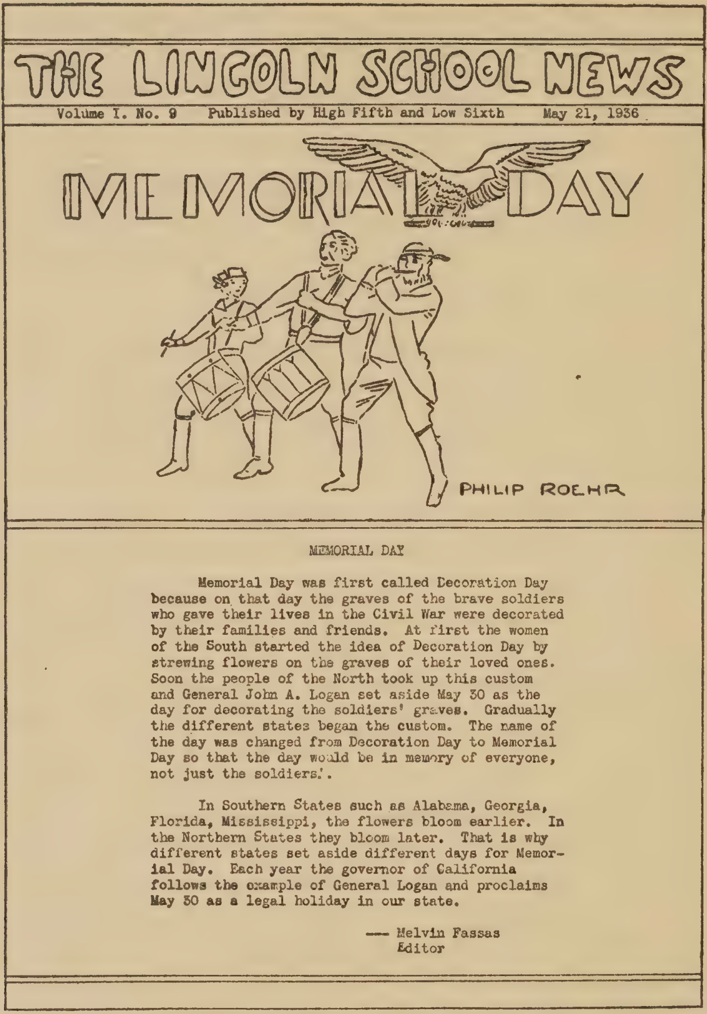
Each issue of the paper contains stories written by children from each of the five older groups and illustrations drawn by children of the primary groups. To supplement these illustrations, stories are told to the teacher, who writes them for the paper. This gives every classroom an opportunity to contribute, and the time is keenly anticipated when the next issue of the *News* will appear.

Two pages from the Memorial Day issue are illustrated in Figs. 18 and 19.

In addition to writing for the Lincoln *News*, many boys and girls in the older groups write stories for the children's page of one of the daily papers. Before these stories can be sent to the newspaper, they must be acceptable to the class teacher and must be well written on one side of the paper in ink. These requirements are valuable in providing incentives for better compositions, better spelling, better handwriting and neatness.

Writing for the daily paper is really an integrating influence in that all Lincoln children who read the paper watch for stories from their school and classmates. "I read your story in the paper this morning" is a common way of greeting a friend on the playground or in the corridor.

Clippings taken at random from the newspaper are included in Figs. 20 and 21.



THE LINCOLN SCHOOL NEWS

Volume I. No. 9 Published by High Fifth and Low Sixth May 21, 1936

MEMORIAL DAY

PHILIP ROEHR

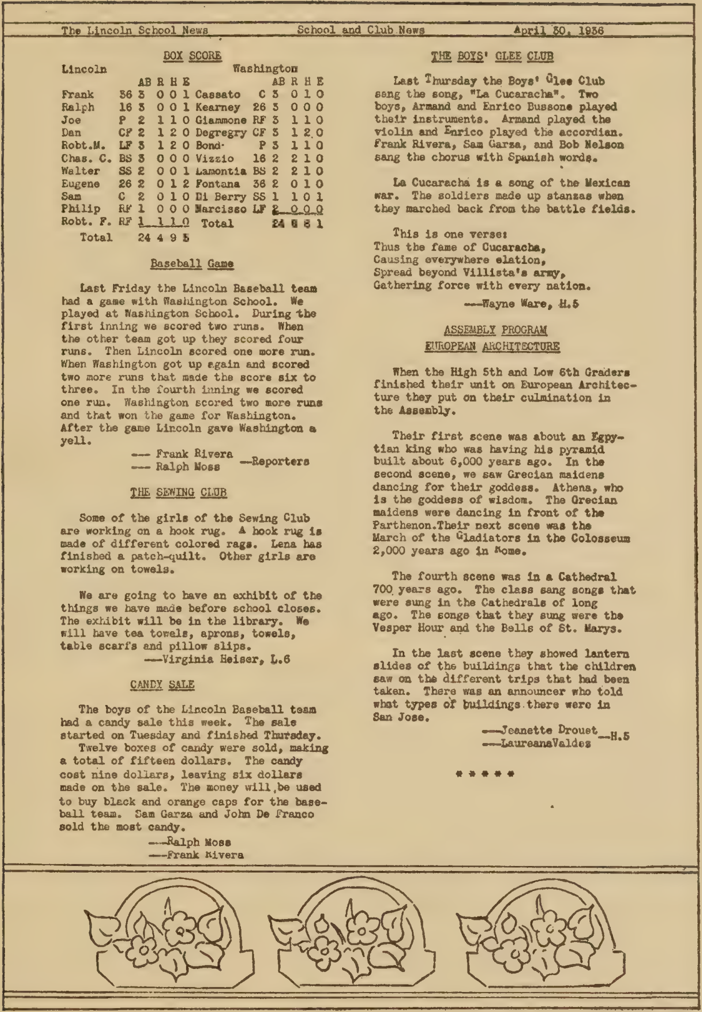
MEMORIAL DAY

Memorial Day was first called Decoration Day because on that day the graves of the brave soldiers who gave their lives in the Civil War were decorated by their families and friends. At first the women of the South started the idea of Decoration Day by strewing flowers on the graves of their loved ones. Soon the people of the North took up this custom and General John A. Logan set aside May 30 as the day for decorating the soldiers' graves. Gradually the different states began the custom. The name of the day was changed from Decoration Day to Memorial Day so that the day would be in memory of everyone, not just the soldiers'.

In Southern States such as Alabama, Georgia, Florida, Mississippi, the flowers bloom earlier. In the Northern States they bloom later. That is why different states set aside different days for Memorial Day. Each year the governor of California follows the example of General Logan and proclaims May 30 as a legal holiday in our state.

—— Melvin Fassas
Editor

● FIG. 18.—*The Lincoln News is issued every 3 weeks.*



The Lincoln School News School and Club News April 30, 1936

BOX SCORE

Lincoln		AB	R	H	E	Washington		AB	R	H	E
Frank	36	3	0	0	1	Cassato	C	3	0	1	0
Ralph	16	3	0	0	1	Kearney	26	3	0	0	0
Joe	P	2	1	1	0	Giammone	RF	3	1	1	0
Dan	CF	2	1	2	0	Degregry	CF	3	1	2	0
Robt.M.	LF	3	1	2	0	Bond	P	3	1	1	0
Chas. C.	BS	3	0	0	0	Vizzio	16	2	2	1	0
Walter	SS	2	0	0	1	Lamontia	BS	2	2	1	0
Eugene	26	2	0	1	2	Fontana	36	2	0	1	0
Sam	C	2	0	1	0	Di Berry	SS	1	1	0	1
Philip	RF	1	0	0	0	Narcisso	LF	2	0	0	0
Robt. F.	RF	1	1	1	0	Total		24	8	8	1
Total		24	4	9	5						

Baseball Game

Last Friday the Lincoln Baseball team had a game with Washington School. We played at Washington School. During the first inning we scored two runs. When the other team got up they scored four runs. Then Lincoln scored one more run. When Washington got up again and scored two more runs that made the score six to three. In the fourth inning we scored one run. Washington scored two more runs and that won the game for Washington. After the game Lincoln gave Washington a yell.

--- Frank Rivera
--- Ralph Moss --Reporters

THE SEWING CLUB

Some of the girls of the Sewing Club are working on a hook rug. A hook rug is made of different colored rags. Lena has finished a patch-quilt. Other girls are working on towels.

We are going to have an exhibit of the things we have made before school closes. The exhibit will be in the library. We will have tea towels, aprons, towels, table scarfs and pillow slips.

---Virginia Heiser, L.6

CANDY SALE

The boys of the Lincoln Baseball team had a candy sale this week. The sale started on Tuesday and finished Thursday. Twelve boxes of candy were sold, making a total of fifteen dollars. The candy cost nine dollars, leaving six dollars made on the sale. The money will be used to buy black and orange caps for the baseball team. Sam Garza and John De Franco sold the most candy.

---Ralph Moss
---Frank Rivera

THE BOYS' GLEE CLUB

Last Thursday the Boys' Glee Club sang the song, "La Cucaracha". Two boys, Armand and Enrico Bussone played their instruments. Armand played the violin and Enrico played the accordian. Frank Rivera, Sam Garza, and Bob Nelson sang the chorus with Spanish words.

La Cucaracha is a song of the Mexican war. The soldiers made up stanzas when they marched back from the battle fields.

This is one verse:
Thus the fame of Cucaracha,
Causing everywhere elation,
Spread beyond Villista's army,
Gathering force with every nation.

---Wayne Ware, H.5

ASSEMBLY PROGRAM
EUROPEAN ARCHITECTURE

When the High 5th and Low 6th Graders finished their unit on European Architecture they put on their culmination in the Assembly.

Their first scene was about an Egyptian king who was having his pyramid built about 6,000 years ago. In the second scene, we saw Grecian maidens dancing for their goddess. Athena, who is the goddess of wisdom. The Grecian maidens were dancing in front of the Parthenon.Their next scene was the March of the Gladiators in the Colosseum 2,000 years ago in Rome.

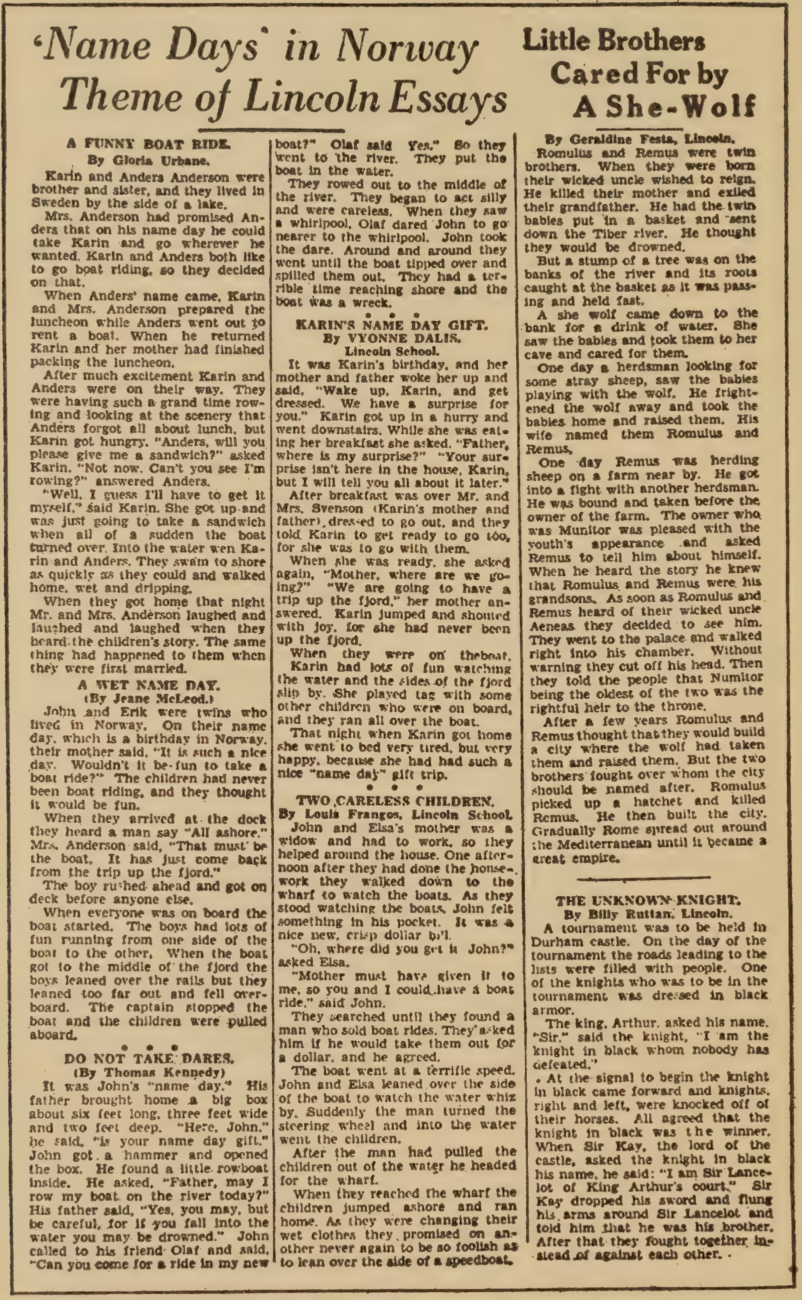
The fourth scene was in a Cathedral 700 years ago. The class sang songs that were sung in the Cathedrals of long ago. The songs that they sung were the Vesper Hour and the Bells of St. Marys.

In the last scene they showed lantern slides of the buildings that the children saw on the different trips that had been taken. There was an announcer who told what types of buildings there were in San Jose.

---Jeanette Drouet
---LaureanaValdes --H.5

* * * * *

FIG. 19.—*Although the reporters are from the high fifth—low sixth group, they gather school news from all available sources.*



'Name Days' in Norway Theme of Lincoln Essays

A FUNNY BOAT RIDE.

By Gloria Urbane.

Karin and Anders Anderson were brother and sister, and they lived in Sweden by the side of a lake.

Mrs. Anderson had promised Anders that on his name day he could take Karin and go wherever he wanted. Karin and Anders both like to go boat riding, so they decided on that.

When Anders' name came, Karin and Mrs. Anderson prepared the luncheon while Anders went out to rent a boat. When he returned Karin and her mother had finished packing the luncheon.

After much excitement Karin and Anders were on their way. They were having such a grand time rowing and looking at the scenery that Anders forgot all about lunch, but Karin got hungry. "Anders, will you please give me a sandwich?" asked Karin. "Not now. Can't you see I'm rowing?" answered Anders.

"Well, I guess I'll have to get it myself," said Karin. She got up and was just going to take a sandwich when all of a sudden the boat turned over. Into the water wen Karin and Anders. They swam to shore as quickly as they could and walked home, wet and dripping.

When they got home that night Mr. and Mrs. Anderson laughed and laughed and laughed when they heard the children's story. The same thing had happened to them when they were first married.

A WET NAME DAY.

(By Jeane McLeod.)

John and Erik were twins who lived in Norway. On their name day, which is a birthday in Norway, their mother said, "It is such a nice day. Wouldn't it be fun to take a boat ride?" The children had never been boat riding, and they thought it would be fun.

When they arrived at the dock they heard a man say "All ashore." Mrs. Anderson said, "That must be the boat. It has just come back from the trip up the fjord."

The boy rushed ahead and got on deck before anyone else.

When everyone was on board the boat started. The boys had lots of fun running from one side of the boat to the other. When the boat got to the middle of the fjord the boys leaned over the rails but they leaned too far out and fell overboard. The captain stopped the boat and the children were pulled aboard.

• • •

DO NOT TAKE DARES.

(By Thomas Kennedy)

It was John's "name day." His father brought home a big box about six feet long, three feet wide and two feet deep. "Here, John," he said, "is your name day gift." John got a hammer and opened the box. He found a little rowboat inside. He asked, "Father, may I row my boat on the river today?" His father said, "Yes, you may, but be careful, for if you fall into the water you may be drowned." John called to his friend Olaf and said, "Can you come for a ride in my new boat?" Olaf said Yes." So they went to the river. They put the boat in the water.

They rowed out to the middle of the river. They began to act silly and were careless. When they saw a whirlpool, Olaf dared John to go nearer to the whirlpool. John took the dare. Around and around they went until the boat tipped over and spilled them out. They had a terrible time reaching shore and the boat was a wreck.

• • •

KARIN'S NAME DAY GIFT.

By VYONNE DALIS.

Lincoln School.

It was Karin's birthday, and her mother and father woke her up and said, "Wake up, Karin, and get dressed. We have a surprise for you." Karin got up in a hurry and went downstairs. While she was eating her breakfast she asked, "Father, where is my surprise?" "Your surprise isn't here in the house, Karin, but I will tell you all about it later."

After breakfast was over Mr. and Mrs. Svenson (Karin's mother and father), dressed to go out, and they told Karin to get ready to go too, for she was to go with them.

When she was ready, she asked again, "Mother, where are we going?" "We are going to have a trip up the fjord," her mother answered. Karin jumped and shouted with joy, for she had never been up the fjord.

When they were on theboat, Karin had lots of fun watching the water and the sides of the fjord slip by. She played tag with some other children who were on board, and they ran all over the boat.

That night when Karin got home she went to bed very tired, but very happy, because she had had such a nice "name day" gift trip.

• • •

TWO CARELESS CHILDREN.

By Louis Frangos, Lincoln School.

John and Elsa's mother was a widow and had to work, so they helped around the house. One afternoon after they had done the housework they walked down to the wharf to watch the boats. As they stood watching the boats, John felt something in his pocket. It was a nice new, crisp dollar bill.

"Oh, where did you get it John?" asked Elsa.

"Mother must have given it to me, so you and I could have a boat ride," said John.

They searched until they found a man who sold boat rides. They asked him if he would take them out for a dollar, and he agreed.

The boat went at a terrific speed. John and Elsa leaned over the side of the boat to watch the water whiz by. Suddenly the man turned the steering wheel and into the water went the children.

After the man had pulled the children out of the water he headed for the wharf.

When they reached the wharf the children jumped ashore and ran home. As they were changing their wet clothes they promised on another never again to be so foolish as to lean over the side of a speedboat.

Little Brothers Cared For by A She-Wolf

By Geraldine Festa, Lincoln.

Romulus and Remus were twin brothers. When they were born their wicked uncle wished to reign. He killed their mother and exiled their grandfather. He had the twin babies put in a basket and sent down the Tiber river. He thought they would be drowned.

But a stump of a tree was on the banks of the river and its roots caught at the basket as it was passing and held fast.

A she wolf came down to the bank for a drink of water. She saw the babies and took them to her cave and cared for them.

One day a herdsman looking for some stray sheep, saw the babies playing with the wolf. He frightened the wolf away and took the babies home and raised them. His wife named them Romulus and Remus.

One day Remus was herding sheep on a farm near by. He got into a fight with another herdsman. He was bound and taken before the owner of the farm. The owner who was Munitor was pleased with the youth's appearance and asked Remus to tell him about himself. When he heard the story he knew that Romulus and Remus were his grandsons. As soon as Romulus and Remus heard of their wicked uncle Aeneas they decided to see him. They went to the palace and walked right into his chamber. Without warning they cut off his head. Then they told the people that Numitor being the oldest of the two was the rightful heir to the throne.

After a few years Romulus and Remus thought that they would build a city where the wolf had taken them and raised them. But the two brothers fought over whom the city should be named after. Romulus picked up a hatchet and killed Remus. He then built the city. Gradually Rome spread out around the Mediterranean until it became a great empire.

THE UNKNOWN KNIGHT.

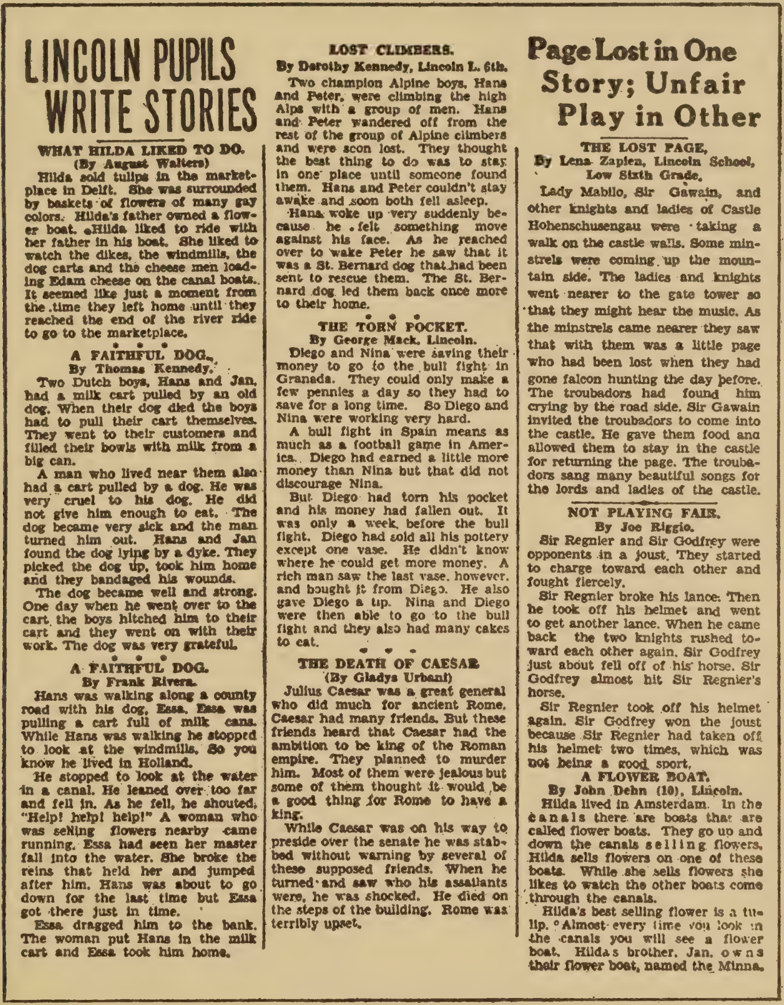
By Billy Ruttan, Lincoln.

A tournament was to be held in Durham castle. On the day of the tournament the roads leading to the lists were filled with people. One of the knights who was to be in the tournament was dressed in black armor.

The king, Arthur, asked his name. "Sir," said the knight, "I am the knight in black whom nobody has defeated."

At the signal to begin the knight in black came forward and knights, right and left, were knocked off of their horses. All agreed that the knight in black was the winner. When Sir Kay, the lord of the castle, asked the knight in black his name, he said: "I am Sir Lancelot of King Arthur's court." Sir Kay dropped his sword and flung his arms around Sir Lancelot and told him that he was his brother. After that they fought together instead of against each other.

FIG. 20.—*A real incentive for writing interesting, grammatically correct stories is the probability of their being printed in the city paper.*



LINCOLN PUPILS WRITE STORIES

WHAT HILDA LIKED TO DO.

(By August Walters)

Hilda sold tulips in the marketplace in Delft. She was surrounded by baskets of flowers of many gay colors. Hilda's father owned a flower boat. Hilda liked to ride with her father in his boat. She liked to watch the dikes, the windmills, the dog carts and the cheese men loading Edam cheese on the canal boats. It seemed like just a moment from the time they left home until they reached the end of the river ride to go to the marketplace.

* * *

A FAITHFUL DOG.

By Thomas Kennedy.

Two Dutch boys, Hans and Jan, had a milk cart pulled by an old dog. When their dog died the boys had to pull their cart themselves. They went to their customers and filled their bowls with milk from a big can.

A man who lived near them also had a cart pulled by a dog. He was very cruel to his dog. He did not give him enough to eat. The dog became very sick and the man turned him out. Hans and Jan found the dog lying by a dyke. They picked the dog up, took him home and they bandaged his wounds.

The dog became well and strong. One day when he went over to the cart the boys hitched him to their cart and they went on with their work. The dog was very grateful.

* * *

A FAITHFUL DOG.

By Frank Rivera.

Hans was walking along a county road with his dog, Essa. Essa was pulling a cart full of milk cans. While Hans was walking he stopped to look at the windmills. So you know he lived in Holland.

He stopped to look at the water in a canal. He leaned over too far and fell in. As he fell, he shouted, "Help! help! help!" A woman who was selling flowers nearby came running. Essa had seen her master fall into the water. She broke the reins that held her and jumped after him. Hans was about to go down for the last time but Essa got there just in time.

Essa dragged him to the bank. The woman put Hans in the milk cart and Essa took him home.

LOST CLIMBERS.

By Dorothy Kennedy, Lincoln L. 6th.

Two champion Alpine boys, Hans and Peter, were climbing the high Alps with a group of men. Hans and Peter wandered off from the rest of the group of Alpine climbers and were soon lost. They thought the best thing to do was to stay in one place until someone found them. Hans and Peter couldn't stay awake and soon both fell asleep.

Hans woke up very suddenly because he felt something move against his face. As he reached over to wake Peter he saw that it was a St. Bernard dog that had been sent to rescue them. The St. Bernard dog led them back once more to their home.

* * *

THE TORN POCKET.

By George Mack, Lincoln.

Diego and Nina were saving their money to go to the bull fight in Granada. They could only make a few pennies a day so they had to save for a long time. So Diego and Nina were working very hard.

A bull fight in Spain means as much as a football game in America. Diego had earned a little more money than Nina but that did not discourage Nina.

But Diego had torn his pocket and his money had fallen out. It was only a week before the bull fight. Diego had sold all his pottery except one vase. He didn't know where he could get more money. A rich man saw the last vase, however, and bought it from Diego. He also gave Diego a tip. Nina and Diego were then able to go to the bull fight and they also had many cakes to eat.

* * *

THE DEATH OF CAESAR

(By Gladys Urbani)

Julius Caesar was a great general who did much for ancient Rome. Caesar had many friends. But these friends heard that Caesar had the ambition to be king of the Roman empire. They planned to murder him. Most of them were jealous but some of them thought it would be a good thing for Rome to have a king.

While Caesar was on his way to preside over the senate he was stabbed without warning by several of these supposed friends. When he turned and saw who his assailants were, he was shocked. He died on the steps of the building. Rome was terribly upset.

Page Lost in One Story; Unfair Play in Other

THE LOST PAGE,

By Lena Zapien, Lincoln School, Low Sixth Grade.

Lady Mabilo, Sir Gawain, and other knights and ladies of Castle Hohenschusengau were taking a walk on the castle walls. Some minstrels were coming up the mountain side. The ladies and knights went nearer to the gate tower so that they might hear the music. As the minstrels came nearer they saw that with them was a little page who had been lost when they had gone falcon hunting the day before. The troubadors had found him crying by the road side. Sir Gawain invited the troubadors to come into the castle. He gave them food and allowed them to stay in the castle for returning the page. The troubadors sang many beautiful songs for the lords and ladies of the castle.

NOT PLAYING FAIR.

By Joe Riggio.

Sir Regnier and Sir Godfrey were opponents in a joust. They started to charge toward each other and fought fiercely.

Sir Regnier broke his lance. Then he took off his helmet and went to get another lance. When he came back the two knights rushed toward each other again. Sir Godfrey just about fell off of his horse. Sir Godfrey almost hit Sir Regnier's horse.

Sir Regnier took off his helmet again. Sir Godfrey won the joust because Sir Regnier had taken off his helmet two times, which was not being a good sport.

A FLOWER BOAT.

By John Dehn (10), Lincoln.

Hilda lived in Amsterdam. In the canals there are boats that are called flower boats. They go up and down the canals selling flowers. Hilda sells flowers on one of these boats. While she sells flowers she likes to watch the other boats come through the canals.

Hilda's best selling flower is a tulip. Almost every time you look in the canals you will see a flower boat. Hilda's brother, Jan, owns their flower boat, named the Minna.

FIG. 21.—*Every morning Lincoln boys and girls examine the newspaper for stories that have been written by them or by their classmates.*

MUSICAL ORGANIZATIONS

A rhythm band, whose members come from the three younger groups, rehearses regularly. This band has uniforms consisting of red and white capes and caps. They appear frequently at primary assemblies and occasionally at general ones.

A 16-piece orchestra secures its musicians from all five of the older groups. This orchestra plays for special assemblies and graduations. Most of its members participate in the city-wide annual combined-orchestra concert.

A boys' glee club of 30 and a girls' glee club of 40 voices hold regular rehearsals and participate in special school programs. Those children in the three older groups who like to sing may join the clubs. These two organizations participate in a combined glee-carol program, given out of doors for the community, at Christmas time. They also sang in the city-wide glee program for the state convention of the Parent Teachers' Association.

AN INTEGRATIVE SCHOOL

One of the valuable contributions that the modern school makes to the education of childhood is the opportunity it gives each child to participate in a variety of experiences. The clubs at Lincoln give each child eight years of age and above an opportunity to follow his special interest in a group that has interests similar to his, regardless of age. Most of these club groups count as members boys and girls from eight to thirteen years of age. The companionship of others interested in similar things is not all. The accomplishments of the club or of its individual members may be displayed for the approval of others.

The assemblies are valuable in cementing together the various groups not only as a medium for joyful singing in a large group but also as a means of appreciating what others are accomplishing and are capable of doing. The traffic squad gives its members ample opportunity to develop such important characteristics as responsibility, dependability and stick-to-it-iveness. The traffic boy takes his post in

● FIG. 22.—*The Kinderband. These young musicians are "getting the feel" of rhythm. Later many of them will join the school orchestra.*

stormy as well as in sunny weather. Interdependence of members of the group, especially the very young members, is recognized and accepted by all as they rely upon the traffic officer to assist them when they need help. The council representatives provide another means for drawing the groups closer together. These council members take the responsibility of assisting each boy and girl to conduct himself to his own credit and to the credit of his group. Definite responsibility of one child to a fellow member of his group is often more effective than responsibility only to an adult. The school paper is an integrating influence, for here is another medium of informing the various groups as to what is being done in other parts of the school. There is a real sense of pride in having one's article accepted by the school paper and mimeographed for others to read. The local daily paper provides another outlet for those who wish to write and broaden their field. The musical organizations afford additional means for boys and girls of various groups and ages, but with common interests, to come together, and provide pleasure for themselves and enjoyment for others.

In addition to the special influences listed in this chapter, a feeling of helpfulness and interest in what the other fellow is doing permeates the entire organization of Lincoln School. It is a common occurrence for children from one group, who have something of interest to show or tell, to invite other groups to participate in their activities. Recently the youngest group was experiencing a unit on the circus and at the same time the members of the fourth group were learning about animals of the circus and zoo. A most interesting and profitable half hour was spent when six members of the older group visited the primary room and told the younger children some of the characteristics peculiar to the various animals. They took great joy in answering the questions of the younger group. Here was a real learning situation; the younger children wanted to know and the older were anxious to give the information. It was necessary, of course, for the teacher of the younger group to assure herself that the information being given was authentic. She did this by checking with other members of the visiting group and later with the teacher of the fourth group.

5 · Evaluations

IT IS practically impossible to make a complete evaluation of an activity program. Wrightstone's statistical study* has established, at least, a temporary justification of the work being done in the schools he investigated. Perhaps the best way to evaluate the work being accomplished in any school situation is actually to spend some time in that school, talking with the teachers and children, observing the experiences occurring from day to day in the classroom, watching the action of the children in the corridors and at play, talking with the children about their school, their teachers and their social attitudes. There are some "tangibles" that may be tested objectively, for the modern school does teach fundamental skills and does expect certain basic facts to be learned; but there are also many important "intangibles" emphasized by the modern school that cannot be measured except by subjective means.

FONDNESS FOR SCHOOL

One of the first criteria by which a school should be measured is the degree to which the children *like* their school. Of the approximately 275 children enrolled in Lincoln for 182 school days in 1935–1936 only 2½ days of truancy were recorded. Strictly speaking, one of these days was not voluntary truancy, since the Mexican boy who remained away from school was found by the attendance officer to be preparing a food list for his ill mother. Later the boy took the list to the County Charities so that there would be food in the house for the family at mealtime. When it is considered that the school is located within easy walking distance of several motion-picture theaters and other places of amusement, when it is recognized that about one-third of the children come from homes where both parents are working at least a part of the school year and that many children come from homes where the "school tradition" has never been built up, the reader will understand the significance of the figures just given.

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* Wrightstone, J. Wayne, APPRAISAL OF NEWER PRACTICES IN SELECTED PUBLIC SCHOOLS, Bureau of Publications, Teachers College, Columbia University, New York, 1935.

The illustration given in Chap. 1 shows that the upper-grade boys prefer school attendance to football attendance if football attendance means missing their club periods. One bright first-grade girl, whose mother wanted her excused 30 minutes early one day a week so that she might take a dancing lesson that could not be arranged at any other hour, refused to leave school before the others went because she "didn't want to miss anything." Teachers are constantly reminding the children at recess time that they must "get some air" and many of them would stay for hours after school if the teacher would permit them to do so. Lincoln children like their school.

SKILLS

It is not sufficient that boys and girls *like* school. In addition to being a happy place, the elementary school must be a place where children learn to read, write, spell and "figure."

In September, 1935, Form W of the Stanford Achievement Test in Reading was given to all groups above the second grade; shortly less than four months later Form Y of the same test was given. The median improvement in tenths of a year for two groups was 4, one group showed a median improvement of 0.45 of a year and two showed 0.5 of a year. The comparison shows that in every group tested the median improvement was greater than the lapsed time between tests.*

The chart on page 119 is a report of the high sixth group which was graduated in February, 1936. The members of the group were given the National Group Intelligence Test in September, 1935, and the Otis Intermediate Test in December, 1935. They were also tested in reading (Stanford Achievement) in January, 1935, and in January, 1936. It will be noted that only one child gained less than 0.9 of a year on his second test. The gain of 4.6 years in one year should be disregarded since this girl had been seriously ill prior to the first test. She was an extremely nervous child and might react very favorably one day and decidedly unfavorably the next. This condition is also indicated by the variation in her intelligence test scores.

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* Four months lapsed time is equivalent to 0.33 of a year.

HIGH SIXTH GROUP, LINCOLN SCHOOL, FEBRUARY, 1936

	Intelligence		Stanford Reading		
Name	National, September, 1935	Otis, December, 1935	January, 1935	January, 1936	Gain
Marian	126	119	7.4	9.0	1.6
Louis	118	117	7.1	7.3	.2
Hoyt	106	108	6.6	7.5	.9
Kenneth	106	107	5.6	7.0	1.4
Billy	107	107	5.9	7.1	1.2
Geraldine	117	105	5.4	10.0	4.6?
Herbert	94	104	5.0	6.9	1.9
August	110	103	6.7	8.4	2.3
John	107	96	6.1	7.0	.9
Maxine	112	95	6.4	7.8	1.4
Jessie	93	94	4.6	5.6	1.0
Gui	95	92	4.4	5.5	1.1
Bernice	88	92	4.9	5.8	.9
George	87	89	4.1	5.9	1.8
Frank	86	85	4.4	5.5	1.1
Willie	72	73	4.3	5.2	.9
Thomas	71	71	3.0	4.4	1.4

This group made up about one half of the enrollment of Room D, mentioned in Chap. 2. According to the results of the National Intelligence Tests given in September, 1935, Room D ranked higher in intelligence than any other in the school.

Handwriting is a necessary tool for written expression. The following samples were taken from high first grade (first five) and high sixth (last two). The high-sixth samples would receive a "better than average" rating on any handwriting scale intended to measure the work of sixth-grade children.

All the groups from third grade through the sixth were tested on lists of words taken from the State Text Book in Spelling.* Groups of comparable environment and intelligence from another school were also tested on the same lists. The children from Lincoln School had studied the words listed only as they were needed in writing letters, diaries, stories or poems. The children from the other school had formal spelling lessons on the words in the lists every day. A comparison of results of the spelling tests showed that the median scores of the Lincoln children were but 0.1 lower than those of the children who had received formal instruction in these particular words. It seems fair to say that the spelling vocabulary of the Lincoln children is in all probability larger than that of the children from the other school because Lincoln children have found need for learning to spell many words that were not in the lists given in the speller.

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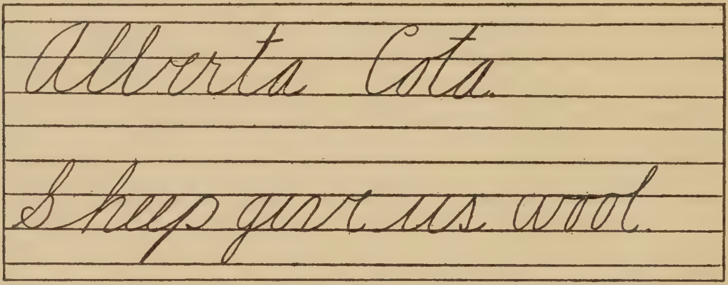
* Ayer, Oberholtzer, Lane, GOLDEN STATE SPELLER, World Book Company, Yonkers-on-Hudson, New York, 1935.



Alberta Cota.

Sheep give us wool.

● FIG. 23*a*.—*For descriptive legend see opposite page.*

Near the close of the school year the Stanford Achievement Test in Arithmetic was given to all children above the second grade. For grade classification (in order to make comparison with the norms) the children were grouped into nine divisions, one for each half grade except the high fifth, where there were two divisions. Of the nine divisions, seven equaled or exceeded the norm in reasoning; seven equaled or exceeded the norm in computation.* Of the two divisions of high fifth grade, the more advanced section exceeded the norm in computation and in reasoning; the less advanced section failed to reach the norm by 0.2 of a year in computation and 0.4 of a year in reasoning.

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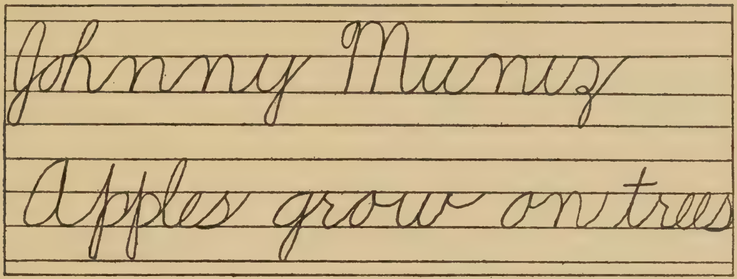
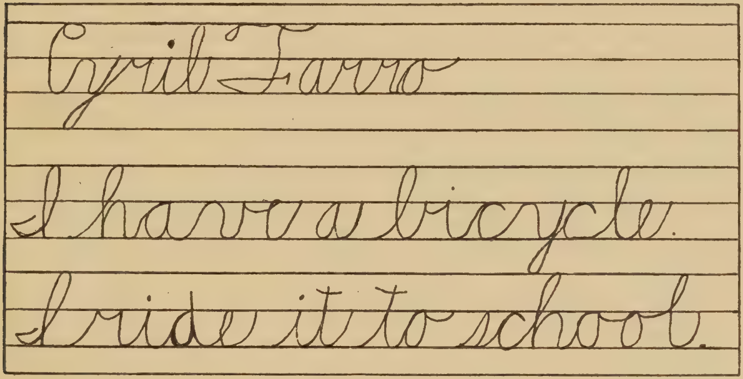
* A check of the problems in the computation test against the San Jose Arithmetic Course of Study revealed the fact that low-third children could not make the required test norm unless they solved types of problems to which they had not been introduced.



Johnny Munoz

Apples grow on trees

● FIG. 23*b*.

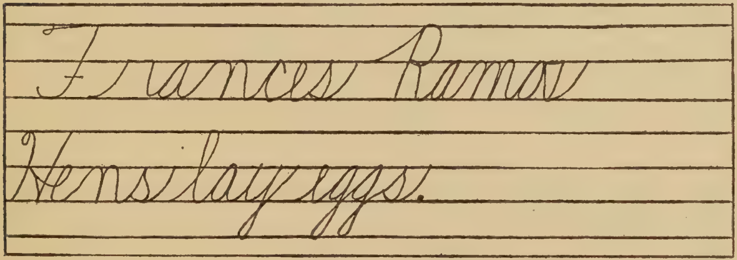


Cyril Farro

I have a bicycle.

I ride it to school.

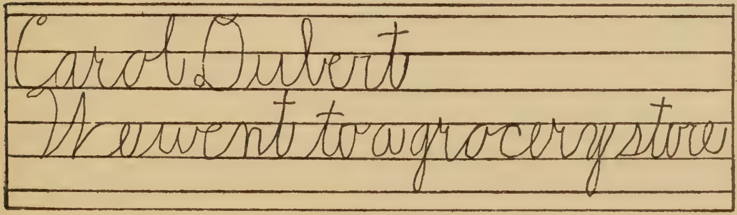
● FIG. 23*c*.



Frances Ramo

Hens lay eggs.

● FIG. 23*d*.

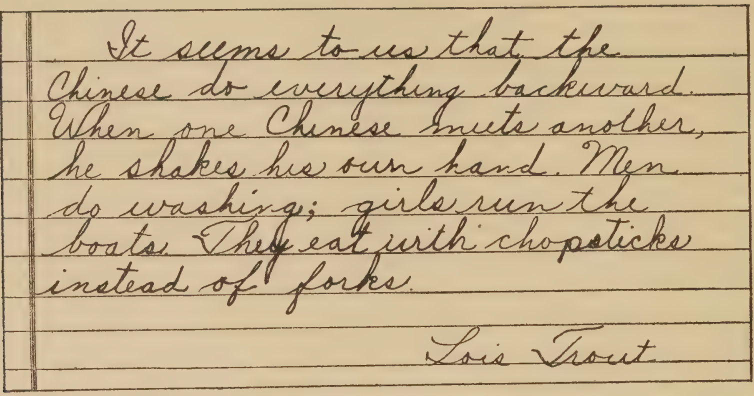


Carol Dubert

We went to a grocery store

● FIG. 23*e*.

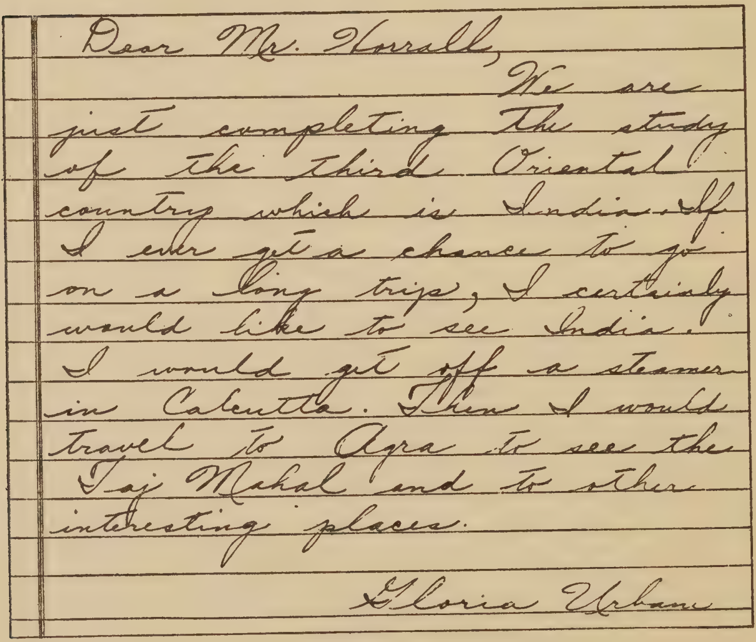
● FIG. 23*a* to 23*e*.—*Handwriting plates. Taken from high first grade.*



It seems to us that the Chinese do everything backward. When one Chinese meets another, he shakes his own hand. Men do washing; girls run the boats. They eat with chopsticks instead of forks.

Lois Trout

● FIG. 24.



Dear Mr. Horrall,

We are just completing the study of the third Oriental country which is India. If I ever get a chance to go on a long trip, I certainly would like to see India. I would get off a steamer in Calcutta. Then I would travel to Agra to see the Taj Mahal and to other interesting places.

Gloria Urban

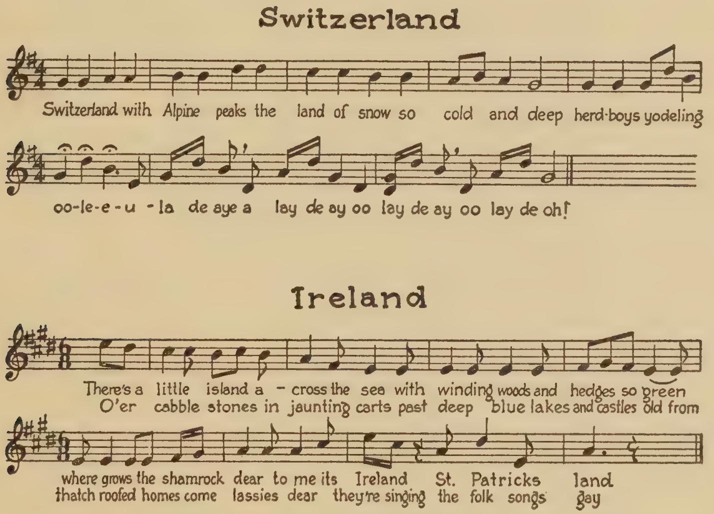
● FIG. 25.

● FIGS. 24 and 25.—*Handwriting plates. Samples from high sixth grade.*

CREATIVE OPPORTUNITY

A third basis for measurement of a modern elementary school should be the degree to which children are given opportunity to develop creative abilities and interests. The illustrations and examples given in the various chapters of this book show some of the results of such development on the part of children of varying age levels.

The following songs were created by eleven- and twelve-year-olds while they were studying Homes and Peoples of Modern Europe. Two members of the class wrote the lyrics. The melody is a composite of tunes hummed to the teacher by several members of the group.


Switzerland
Switzerland with Alpine peaks the land of snow so cold and deep herd-boys yodeling
oo-le-e-u -la de aye a lay de ay oo lay de ay oo lay de oh!
Ireland
There's a little island a - cross the sea with winding woods and hedges so green
O'er cabble stones in jaunting carts past deep blue lakes and castles old from
where grows the shamrock dear to me its Ireland St. Patricks land
thatch roofed homes come lassies dear they're singing the folk songs gay

● FIG. 26.—*Creative Music.*

The art plates illustrate the development of composition technique as well as the use of various mediums.

In addition to creating pictures, songs, scenery and vehicles and structures for use in dramatizations, Lincoln boys and girls are given many opportunities to create stories and poems. The following are excerpts from an imaginary diary written by a ten-year-old boy while experiencing the thrills of Westward Expansion.

In May, we started our long journey up the Missouri River. The first day we passed a few tiny settlements and met French trappers coming down the river with canoes loaded with furs. They said that we would see many Indian tribes as we go along and great herds of buffalo across the plains. We can go only 20 or 25 miles a day. . . .

The Indians we found were quite different from those we had seen in the east. In the wintertime they have no sheltered places to live. They have no permanent village in which to stay. They have to kill buffalo for food and they use buffalo skins for their tepees. . . .

Now that the winter is over, we are all glad. We had to send the weaker men to their homes, while the stronger remained with us. We have found an Indian whom we call the "Bird Woman." She is our guide and is very brave. She makes moccasins for our men.

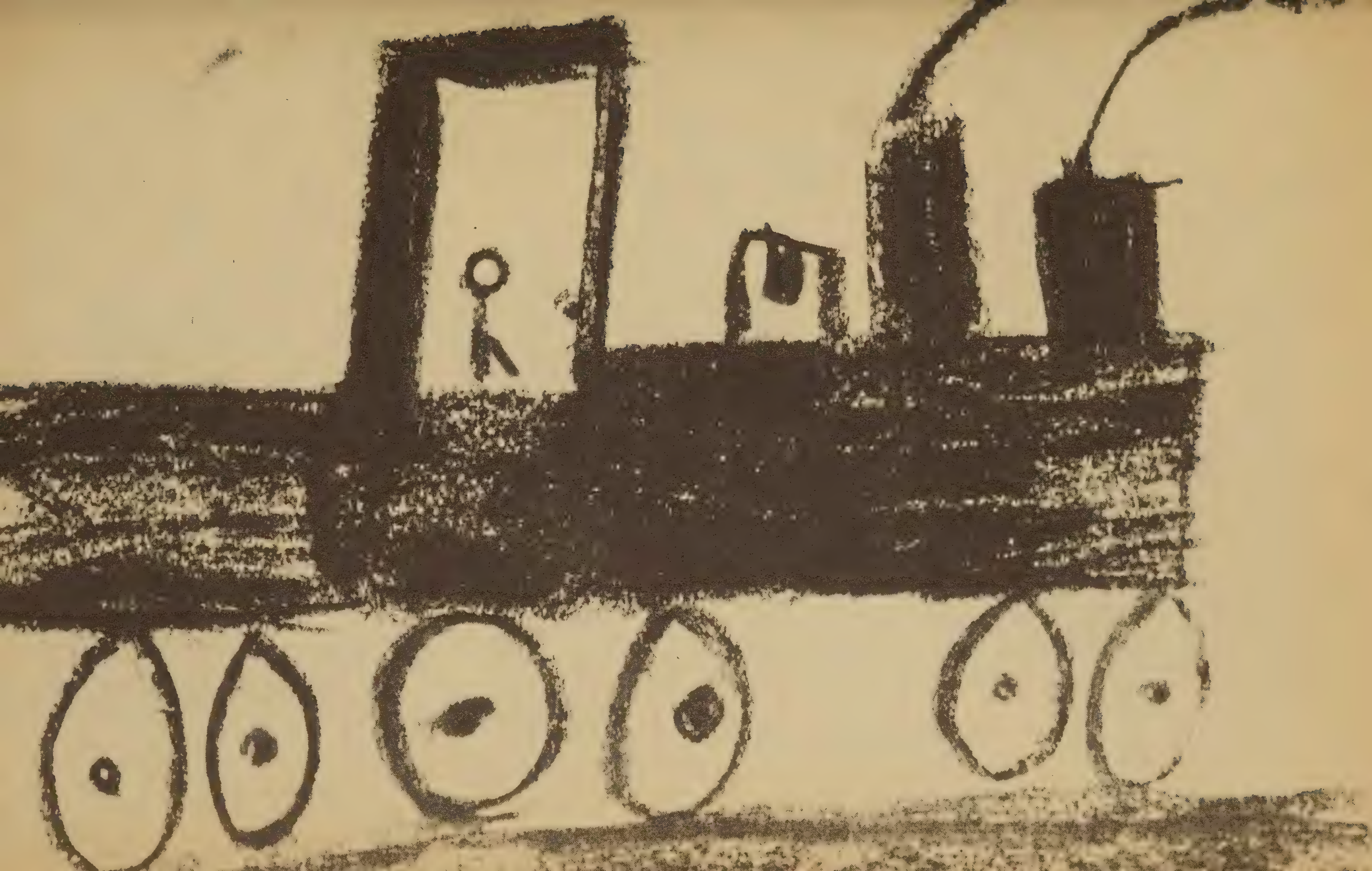
A nine-year-old girl in the same group wrote in part as follows:

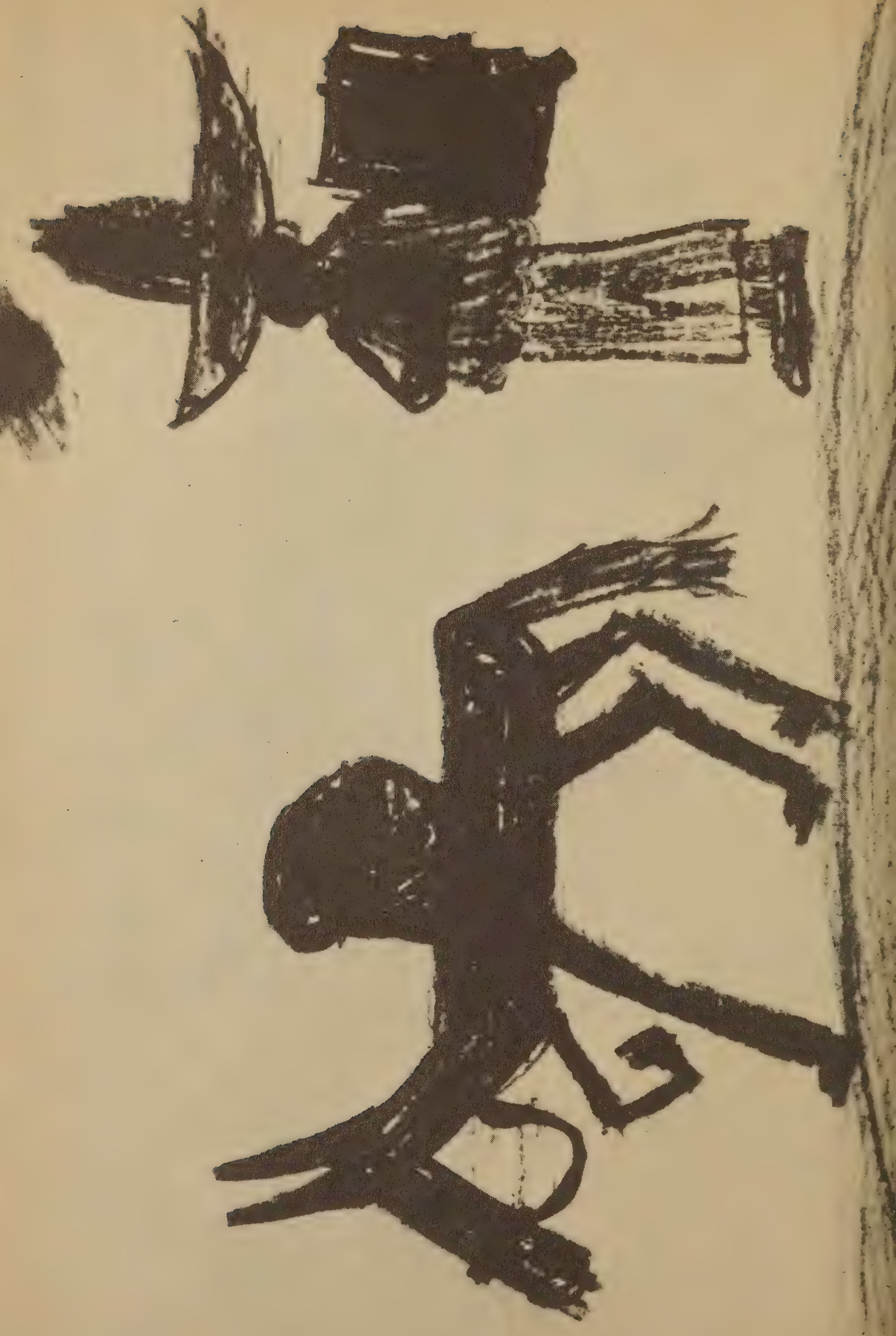
Tonight I am very sad because my father told me we are going to leave my beautiful home here in New Hampshire. I cried most of the day after I heard this news. I felt better, however, when my father told me I could take my pet chicken and Daisy, my white calf, and Snuff, my little yellow dog, and Flora, my beautiful doll. Father says we are going to leave tomorrow morning.

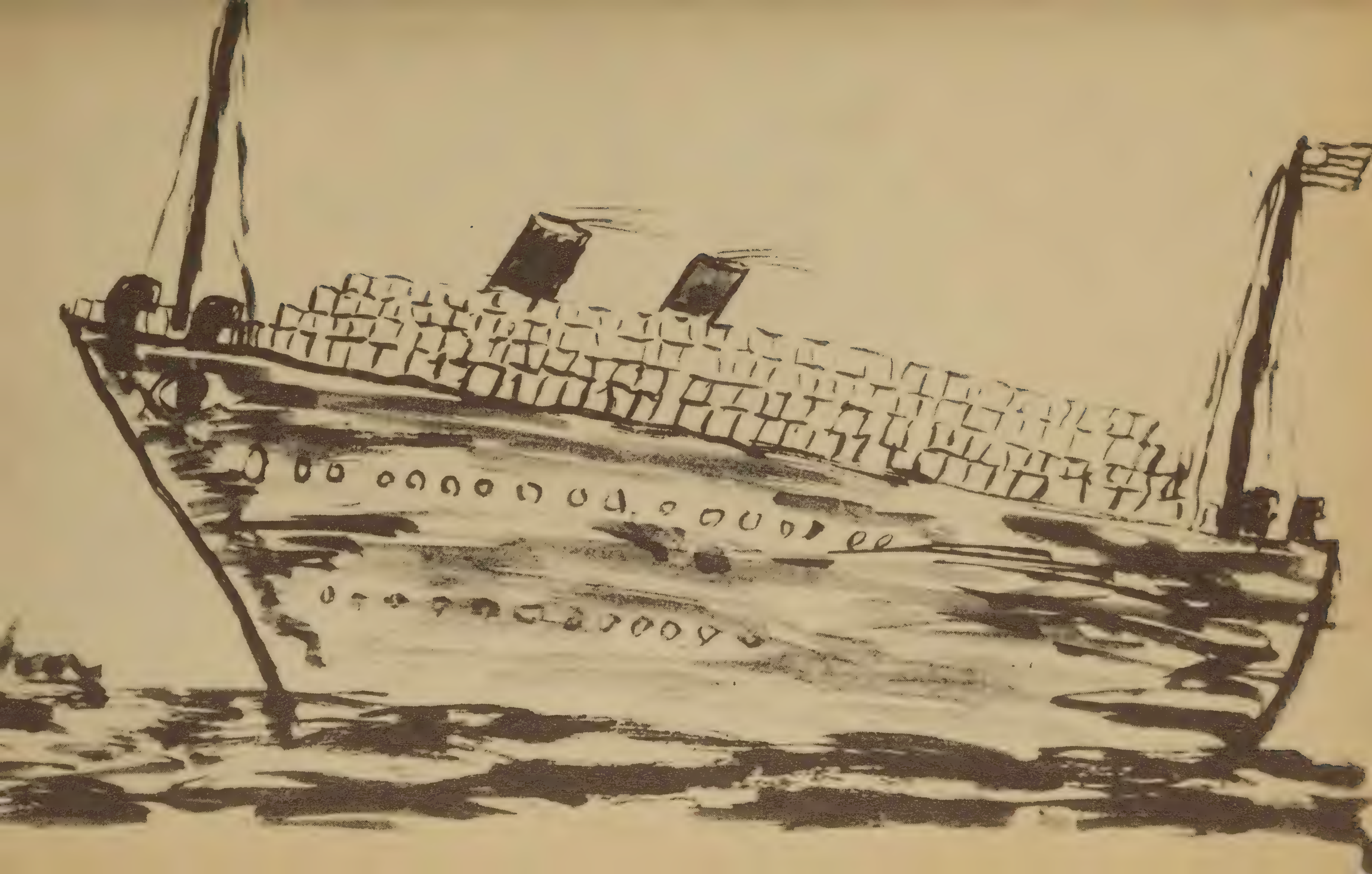
This morning, after I got up and ate my breakfast, I went down to say good-by to the old oak tree that used to be my playhouse for so long. I even said good-by to the grass and flowers. I could hardly see them because my eyes were full of tears.

My father asked mother if everything was packed and ready. Mother said everything was ready. I did not want to go but father said we were going to move west. He said we would like it when we got there. I hope so. Father lifted me into the wagon. Snuff rode in front with my mother and me. Daisy and the chicken sat in the wagon. I held Flora doll in my arms. Finally we were started.

- ● Fig. 27.—*Low and high first grade. Colored chalk.*
- ● Fig. 28.—*Low and high second grade. Wax crayon.*
- ● Fig. 29.—*High second and low third grade. Calcimine.*
- ● Fig. 30.—*High third and low fourth grade. Wax crayon.*
- ● Fig. 31.—*High fourth grade. Water color.*
- ● Fig. 32.—*Low and high fifth grade. Wax crayon.*
- ● Fig. 33.—*High fifth and low sixth grade. Water paint (spatter).*
- ● Fig. 34.—*High sixth grade. Water color.*







1936
WAYNE

1936
JEANETTE

An eleven-year-old boy expressed his feelings about Spain in these words:

If I were in Spain today,
I would want to see a bullfight,
And watch people dancing the fandango.
I would like to see the Alhambra,
And visit at a fiesta.
I would like to see the cork trees,
And take a long siesta.

A ten-year-old, at the conclusion of the study of Mexico, wrote the following:

IN MEXICO

Now if I could go to Mexico
By car or on the train,
I'd visit great big pyramids
On the desert plain.
I'd go to see a potter
Busy at his wheel,
Little burros there I'd see
With their master at the heel.
I'd go to an arena
To see a big bullfight,
The matador would hold
His horse's reins so tight.
They tease the angry bull
And make him snort with pain;
Then they gallop off
And give the horse the rein.

A ten-year-old called this story a "hunting trip."

A Hunting Trip

Bruce and Laurie, who lived in Scotland, went on a hunting trip one Saturday morning. They walked for about three miles through purple heather; then just ahead of them they saw a flock of grouse. Laurie was about to shoot when Bruce stopped him, saying, "Don't shoot! Do you want to scare the whole flock away?" They crept up slowly until they were about twenty feet away from the birds. Each boy pointed his gun at a fat, juicy grouse. Then all of a sudden there were two birds lying on the grass.

The following poems were written by nine- and ten-year-olds in the fifth (high fourth grade) group.

POEMS ON RAIN AND SNOW

I love to hear the noisy rain,
As it comes sliding down my window pane
I see it now dancing upon the street,
And it sounds like drums as they beat.
Class

I love to see the snow so white,
When it falls on my roof at night,
Did you ever see the snow,
As it falls on the sidewalk below?
Betty Lou

The snow is very white and cold,
The wind blows hard and bold.
The children all like winter, you know,
Because they like to play in the snow.
Richard

I like to see the fluffy snow,
Where it comes from I do not know.
The snow is very light
And paints everything snowy white.
Lulu Mae

One day I heard the rain's dancing feet,
I looked and saw it on the street,
The sun was behind a cloud,
Then the thunder came so loud.
Glendawon

Oh, the rain is coming down so fast,
And as I watch it going past,
It falls down oh, so gay,
And plays a tune all the day.
Elden

I like to play in the soft white snow,
I like to hear the soft wind blow,
When the flufly snowflakes fall,
Then I go out and make a snowball.
Robert

POEMS ON CLOUDS

Way up there in the blue, blue sky,
You can see the clouds go sailing by,
The cumulus clouds are very fat,
The stratus clouds are thin and flat.
Class

The fleecy clouds are very white,
They never go to sleep at night,
Around and around the world they go,
Never fast and never slow.
Henrietta

Some clouds are fat and fluffy,
Sometimes they look like a puppy,
Other clouds are very dark,
The little puppy is going to bark.
Lawrence

I saw some clouds so big and dark,
Then the lightning flashed like a spark
Then I heard the thunder roar,
And the waves crashed on the sandy shore.
Richard

One day I saw the sun up high,
It was in the blue, blue sky,

All of a sudden it began to rain,
It slid right down my window pane.
Barbara

The big, dark clouds were up so high,
Then rain began to fall from the sky,
I knew there was a nimbus cloud
Because the thunder roared so loud.
Elmo

I like the clouds in the sky,
But when they go sailing by,
I would like to know
Just where they will go.
Elden

HEALTH RESULTS

The extent to which the health service of a school actually functions is a matter of primary importance. Especially is this true in a school faced by conditions such as those that exist in Lincoln School. The statement was made in an earlier chapter that the parents of more than 40 per cent of the children enrolled in the school were on relief, at least a part of the year. This fact, coupled with the necessity for much home visitation and health instruction in homes where little or no English is spoken, placed a heavy burden on the school nurse.

Just how well she was able to cope with this difficult situation is shown in part by the following statistics:

October 1, 1935: 13.2 per cent of the enrollment was at least 10 per cent underweight. June 10, 1936: this percentage had been reduced ¼, to 9.9 per cent.

These children were given free milk (when the family could not afford to purchase it), and regular rest periods were prescribed. During the school year 49 different children received free milk. At the close of the year 30 were receiving free milk, 20 of this number have been diagnosed as malnourished by physicians.

Six children in the school, according to the school nurse, need glasses for eye correction. The school has purchased glasses for one of these cases, the parents have provided glasses for another child. Four children in the school are yet to be cared for. Parents have been interviewed and satisfactory results are expected before the opening of school in September in most of these cases.

There have been no epidemics in the school during the year. This was due in part to the good work of the nurse and in part to the vigilance of the classroom teacher. Cleanliness has been stressed through health talks and daily inspection. With a very few notable exceptions, the children at Lincoln are cleanly in their person, habits and surroundings. This condition is appreciated all the more since facilities for cleanliness are so limited in many homes.

FUNCTIONING CITIZENSHIP

Two illustrations of functioning citizenship on the part of Lincoln boys and girls seem rather significant. One of the primary groups, while reading about and discussing gardens, decided to make a garden in the school yard. The ground was prepared early in March, seeds were planted and a string fence was placed around the plot to remind those playing near by to keep off. It was almost a month later before the wooden fence was built and in place. During all this time, and later when the flowers began to bloom and the radishes were ready to be picked, no one disturbed the garden. Children are permitted to play on the school ground after dismissal and frequently junior-high-school boys and girls who have attended Lincoln come to the grounds to play after school. Several children from every group in the school anxiously watched for the first signs of new plants; the arrival of buds and blossoms was reported throughout the school.

In an earlier chapter the organization of the traffic squad into a clean-up group was reported. At a later meeting of the squad, near the opening of the baseball season, one of the boys suggested that, since the school custodian was spending the greater part of his noon hour assisting them in learning more about baseball, they should show their appreciation by helping him with some of his work. After some discussion, a committee from the squad waited on the principal to ask if they might sweep the walk in front of the building each morning in order to help the custodian. The permission was granted and a list was prepared so that each boy of the squad knew when he was to be responsible for sweeping the walk. This list was posted on the bulletin board and each boy took his turn voluntarily.

SECONDARY-SCHOOL EVALUATION

One means of determining the worth of a school is the value placed on its graduates by the next higher school. An examination of the grades given boys and girls from four elementary schools after they had been in junior high school for 9 weeks revealed the fact that 3.4 per cent of the grades given Lincoln graduates were unsatisfactory. The percentage of unsatisfactory grades from the other three schools were 3.7, 5.3 and 5.4. The grades were given in social studies, English, mathematics and citizenship. Of the other three schools, the one whose graduates received 3.7 per cent unsatisfactory grades was carrying on an integrated activity program, the 5.3 per cent school a semiactivity program and the 5.4 per cent school a conventional-type program. Since the grade comparison was made as a result of only one graduating class, it should not be given too much significance but is merely an indication.

An analysis of the grades received by the 16 Lincoln graduates reveals the fact that only two persons received unsatisfactory grades. One boy was marked unsatisfactory in mathematics and citizenship and another unsatisfactory in mechanics of English.

SOME NEEDS OF THE SCHOOL

An evaluation of the entire school indicates at least three needs.

1. A wider area for the selection of units of work based more on life needs of boys and girls and less on geographical divisions.
2. Additional storage space provided for each classroom.
3. Protected outdoor space for the development of large construction activities.

A wider area for the selection of units of work based more on life needs of boys and girls and less on geographical divisions. Although the teachers at

● FIG. 35.—*A Dutch Kermis. An outdoor culmination of a study of Holland.*

Lincoln choose their units after due consideration of the breadth and depth of material, more valuable fields could be explored if natural science was given a more prominent place and land-division areas were largely eliminated. As new materials are tried in the classroom, some units will be abandoned or postponed because of incorrect placement according to the maturation of children. The number of units developed in any one semester will undoubtedly decrease.

Additional Storage Space Provided for Each Classroom. A building erected for elementary-school purposes more than 60 years ago is bound to be inadequate in storage space. Fortunately the rooms are large and airy so that it is possible to do large construction work and still have sufficient space for children to work. However, construction materials are not always easy to get and many could be salvaged were there space to store them. A wood pile in a classroom, even when it is hidden behind a screen, is unsightly. It is hoped that in the near future large lockers, similar to those placed in many apartment houses, may be built in the basement of the school for storage of packing boxes, bundles of bamboo and paper cartons.

Protected Outdoor Space for the Development of Large Construction Activities. Although the school has been quite fortunate to date with its outdoor construction there are many types of structures that could be built in the open if a wire-enclosed space was available. The children of the school and community have not disturbed outdoor constructions but if many castles, cities, canals or dikes were built children should not have such a great temptation placed in their way. Protection from small animals is also necessary. These wire enclosures could be used, also, to house pets temporarily.

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PART TWO

Detailed Description of Three Units

6 · A Study of Animals (Circus and Zoo)*

SECTION I. A NARRATIVE ACCOUNT

HOW IT STARTED

"What are we going to study after we finish China and Japan?"

"Let's study about Switzerland."

"I'd like to take a trip to the Philippine Islands."

These and many more suggestions came from the children when the Trip to the Orient was nearing its completion. On the board was written a list of the places that members of the class wished to visit.

Switzerland.
Germany.
Holland.
Philippine Islands.
African jungle.
Greenland.
Alaska.
Mexico.
South American jungle.

After discussing the merits of a trip to each place, votes swung to the African and South American jungles. Why? "The animals. I'd like to take a trip like Martin Johnson did, in a zebra airplane."

"Which jungle is the most dangerous? I'd like that one best."

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* A unit developed by Leah S. Rhodes with high-third- and low-fourth-grade children.

"Suppose, then that we take trips," suggested the teacher, "to several jungles and explore for animals. Did you ever wonder where the animals of the circuses and zoos come from? How would you like that?"

On the next day the following list was made of the animals the children wanted to explore for first:

Elephant.
Monkey.
Giraffe.
Cat family.
Reptiles.
Rhinocerous.
Hippopotamus.
Crocodile.
Kangaroo.

Each child decided which one of these animals he wished to hunt. Those choosing the same animal organized their group with an elected Head Explorer.

The teacher took the elephant for the first few days so that the first groups to report would have plenty of time for exploring.

EXPLORERS

On the bulletin board was placed a chart with pockets for reference slips. The pockets were labeled "Wild," "Tame," "Circus" and "Zoo." The children read and found stories of various animals other than their own and made out reference slips to help the other pupils.

Name of Book____________________
Title of Story____________________
Page____________________
Subject____________________
My Name____________________

It was found that many of the stories were fanciful, so an additional pocket was put at the bottom of the chart and labeled "Fanciful."

A day or two before the first report was given, a list was made of the things the children thought should be included in each exploring group's report:

Describe the animal.
Tell where it lives.
Tell what it eats.
Tell what its home is like.
Tell about its enemies and how it fights.
Tell how it takes care of its young.
Tell special things (*e.g.*, the giraffe has no vocal cords and makes no sound).
Have as many pictures as possible.

JUMBO, THE EDUCATED ELEPHANT

The teacher announced that on Friday of the first week the class would have a visitor, Jumbo, the Educated Elephant. There was great curiosity among the members of the class. One of the boys had been chosen by the teacher and given an idea for entertaining the class. Enthusiastically he made the rest of the plans.

On the appointed morning the boy, dressed in an elephant's costume taken from the costume closet, hid behind a screen until the class assembled. Then one of the girls, who was in on the plan, introduced him to the class.

GLORIA. Today, we have Jumbo, the educated elephant. You may ask him some questions.

Q. What do you eat, Jumbo?

A. Well, I eat grass and I eat sugar cane sometimes.

(*Pause.*)

GLORIA. You may ask him what kind of an elephant he is.

Q. What kind of an elephant are you, Jumbo?

A. You can guess, can't you? Look at my ears.

Q. African elephant?

A. Right.

Q. How long do you live, Jumbo?

A. Sometimes I live to be a hundred years old.

Q. Jumbo, have you any enemies?

A. My enemy is a tiger, and sometimes man.

Q. How old are you, Jumbo?

A. I'm twenty-eight years old now.

Q. What do you use your tusks and your trunk for?

A. I use my trunk to carry water, and when an enemy comes I pick him up and carry him.

Q. Will you die if your tusks come off?

A. No, I will not.

Q. Jumbo, what do people use your tusks for?

A. Well, the natives come and take my tusks because they're ivory.

Q. What do your owners do with your tusks?

A. They sell them to jewelers who make jewelry out of them.

Q. I thought they made piano keys out of them.

A. Yes, they do.

Q. Jumbo, how old do you have to be to be grown up?

A. Thirty years old or more.

Q. What do you do when you want to clean your back?

A. I get into some shallow water and take some water into my trunk. Then I squirt water on my back.

Q. Do any elephants leave the herd?

A. Yes. Just last year one left the herd. He is fierce now and all of the natives are afraid of him.

Q. Does he destroy everything that gets in his way?

A. Yes, all of the animals are afraid of him.

Q. Are you a mammal, Jumbo?

A. I don't know what you mean.

Q. I mean, did you have milk? Were you raised on milk? Did your mother feed you milk when you were little?

A. Yes, that was a long time ago.

Q. Is a lion your enemy?

A. Yes, and if I just snort once a lion runs away. I'm going to tell you something about a lion, but don't tell him because it might hurt his feelings. Well, a lion is just a big bluff and if you see a lion, just say, "There's a big bluff." He'll run away. If you just walk and 'tend your own business, he'll run away.

Q. What about pythons and tigers?

A. Pretty near all the animals are scared of me because I step on the smallest ones. My master says I have to go see some other children now so I'll have to say good by.

Children. Good-by, Jumbo.

REPORTS

About two reports a week were given before the class. After each report stories and illustrations were made for individual notebooks. Sometimes the class as a group wrote the story, again the class would write the first paragraph and each child would write his own ending paragraphs, at other times each child wrote his own account of the animals. Several of the stories and illustrations were printed in the Lincoln School *News*.

The exploring groups frequently illustrated their reports with flat pictures or illustrations from books, with lantern slides from the visual department, or with slides they made themselves. Still others made picture rolls, or large flat pictures to show the class. Most of the reports were factual, but those children who had good imaginations told about the adventures that had befallen *them* as they explored for their animals.

As the animal pictures were made for the booklets, extra ones were cut out and placed around the room. The trees and animals pinned in panels made an effective border, which was divided and labeled:

Animals of the Zoo.
Animals of the Circus.
Wild Animals.
Tame Animals.

"Let's make a big map and show where the different animals come from, like in that book ZOOGRAPHY," suggested one of the children.

So a large world map was made on the back of a piece of oilcloth (about 4 by 5 feet), and as the reports progressed a few children, talented in art, were kept busy making and coloring tiny paper animals to be pasted on the map in their native countries. Because the work was so small and called for good coordination, only a few were able to participate in making the animals, but the entire class helped with the locations for them.

AN EXCURSION TO THE THEATER

When three weeks of exploration had elapsed, it was reported that Frank Buck's picture "Fang and Claw" was coming to one of the theaters. The suggestion was made that it would be a fine picture to see. A student teacher was sent "scouting" the first day it was shown and reported the picture well worth seeing. Parent's consent slips were sent home to be signed and dimes were brought.

PARENT'S CONSENT

Dear Parent:

Mrs. Rhodes is taking her class on a field trip to Mission Theater on Tuesday from 1:00 to 3:30. We are going to walk. Please sign your name to this notice if you are willing for George to go with the rest of the class on the trip. Cost of the trip is 10 cents.

Parent's Signature

(Only three children were unable to bring dimes so their admission was quietly paid.)

When it was learned that the picture was made in the jungles of India and the western part of China, the locations were noted on the map. Ideas were given as to what animals would be shown, and questions were asked about the provisions and precautions for such a trip.

The class discussed behavior on an excursion and decided that certain things should be remembered:

On our way to and from the theater:
  We keep our voices down.
  We keep together.
  We obey our traffic officer's signal.
  We stay on the right-hand side of the sidewalk so we do not interfere with other pedestrians.
In the theater:
  We will do little talking. If we talk, we shall keep our voices very low.
  We will try not to have to go to the lavatory.

Low whispered comments were heard occasionally as the picture progressed:

"Look at the big toes on the elephant."

"See, his ears are smaller than an African elephant's."

"There's the tapir. Isn't he a funny fellow?"

"Those monkeys are carrying things in their pouches. See how fat they are getting."

"Don't the monkeys look like little people as they walk?"

The next morning an enthusiastic discussion ensued concerning the various things that were seen in the picture. This statement summed up the sentiment of the class:

"It was so much fun seeing all those animals since we have been studying about them. I saw a lot more things about them than I would have if I hadn't been studying them."

DEVELOPMENTS FROM THE EXCURSION

"I'd like to learn more about the tapir. Let's put it on our next exploring list."

"Don't you think it would be a good idea to put houses on our map, too, with the animals?"

"What are those big animals called that lived a long time ago and looked like elephants with long hair? I read a story about one one time."

"Dinosaurs?" suggested one.

Another said, "No, dinosaurs looked like great big lizards."

"It's a mammoth," said a third.

"I read a book from our Lincoln Library called BEASTS OF THE TAR PITS that told about them, and big saber-toothed tigers, too."

With comments and suggestions like these, a second list of explorers was formed and Head Explorers were chosen. It was decided that small groups of two or three would be more effective than the groups of five or six that had been formed in the first exploring list.

The second list included:

Tapir.
Anteater.
Sloth.
Hyena.
Bear family.
Prehistoric animals.
Dog family.
Buffalo.
Camel.
Horse family.
Bat.
Goats and sheep.
Deer family.

A TRIP TO THE CITY LIBRARY

The student teacher announced one day that the librarian in the children's department of the city library was planning an afternoon exhibit of animal books for the class. On the appointed day a group of happy children trooped into the city library.

It had been decided ahead of time by the children that there should be a time for reports before they left the library. "We may want to show some pictures and we won't be able to bring all of the books back with us." Accordingly, after about 30 minutes of browsing, the chairs were formed into a circle and reports were given.

Practically every child wanted to make a report so it was decided that only those reports should be made then that necessitated having the books for illustration. The remainder of the reports were to be made at school the following day.

● FIG. 36.—*Listing animal stories for others to read.*

WILD AN
ANIMALS
Zoo
Circus
ame
Wild
Fanciful

There were some in the group who looked only at pictures, but gained in knowledge that way. There were others who became so absorbed in their books that they were oblivious of other children or other books. Only a few members of the group had library cards, but several more said they wanted to go over to the library more frequently with their mothers or friends.

It was a satisfied crowd that thanked the librarian for the pleasure and knowledge gained that afternoon.*

A PROGRAM TO EARN MONEY

The songs, rhythms and poems that the children were learning gave them the idea that a program for the assembly would be great fun. Plans were made and practice was begun in earnest. There were songs about the circus and animals, poems about them for verse choirs, rhythms and antics of animals, and dancers. Someone suggested acrobatics so a clown group was formed.

When the program was well under way, a trip to Fleischacker Zoo in San Francisco was mentioned. Because there were not enough automobiles available in the group, a special bus trip was suggested, but bus rates were found to be $40 for a 38-passenger bus or $50 for a 48-passenger bus. Since it was out of the question for many of the children to bring so much as $1, the question of financing such a trip became a challenge to the class.

Various suggestions were given and the following were finally decided upon:

Let those who could bring a dollar, do so.

Let those who could not bring a dollar, bring as much as possible.

Let the class earn money to help pay the remaining part of the fare.

Some of the children singly or in groups set up lemonade stands at home to earn their money, while others mowed lawns at home or for neighbors. Still others made beds, washed dishes and ran errands. A

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* See book list in bibliography on page 212.

● Fig. 37.—*These "Zoocus" entertainers created their own dance.*

couple of boys got jobs selling newspapers and a few others sold some copper they had collected from garages.

The program that had been planned for assembly was turned into an entertainment called "Zoocus" (for zoo and circus) and was advertised by posters and by announcers as a program for raising funds. So that no one in school would be left out because of lack of funds, a plan was agreed upon that the admission would be from one to ten cents. Those paying ten cents were to be admitted first and given the choice of seats. The others were to come in after the first group had been seated.

The children decided that if taking the trip became an impossibility, the money would be used to buy more animal books for the Lincoln Library. This announcement was well received by the children in every room, who thought it a fine idea.

When the appointed day arrived excitement ran high. The scene for the first act was hanging in place (a large background made of strips of butcher paper pasted together and designed with a clown on an elephant, a monkey on a donkey, a seal balancing a ball, an animal trainer and a clown carrying gay balloons). Above it, and fastened with strips of cloth to facilitate a quick change, was rolled the scene for the second act (a zoo scene including an elephant, a kangaroo, a baby lion, a monkey and a camel in their cages or runs).

The clowns, in costume, were stationed at the doors to collect the money. The remainder of the children were excitedly awaiting the curtain call.

ZOOCUS

Introduction

This afternoon the boys and girls of the high third and low fourth grades are presenting "Zoocus," a program centered around things they have been doing in their unit on The Study of Animals.

Every child in the class has had some part in this program. The first song that they sing is not original, but later they sing the second verse of it about a picnic trip to the zoo that was written especially for the occasion.

The first part of the program centers around our activities in music, literature and physical education. The second part will be a group of slides of the most interesting animals accompanied by stories that members of the class have written.

Scene I

Song, "When the Circus Comes to Town," class.*

Summertime means circus time,
Circus time means happy time,
Happy time for all you girls and boys in the land.
That's the one thing you can't miss,
So you must remember this:

Chorus:

Better put your pennies all away,
Keep 'em where they can't be found,
'Cause you're gonna need them on the day
When the circus comes to town.
You be careful when you're out to play,
Careful how you run around;
Don't forget that you must be Okay
When the circus comes to town.
The funny clowns will be there,
There's elephants to see there,
How you will jump with glee there,
As the cowboys shoot and the Indians scoot.
Better put your pennies all away,
Keep 'em where they can't be found,
'Cause you're gonna need them on the day
When the circus comes to town.

Patter Chorus:

See the little monkey on the little donkey,
Lead the big brass band:
See the little midget standing so rigid
On the giant's hand and
Who's the sheriff after, hear the roar of laughter
While he's throwing pies.
There's always something new, before they get through,
You wish you had a thousand eyes.

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*Harms Publishers, 1250 6th Avenue, Rockefeller Center, New York.

Animal Procession in costume.

Antics original with each pair. Music from COME AND CAPER, Virginia Bennett Whitlock, G. Schirmer, New York, 1932.

Elephants: COME AND CAPER, page 44.

Rabbits: COME AND CAPER, page 45 (bear rhythm).

Monkeys: COME AND CAPER, page 46.

Seals: COME AND CAPER, page 50 (inchworm rhythm).

Song, "The Animal Band," Class

SONG BOOK NUMBER IV, page 54. Churchill Grindell Co., 1913

The Animal Band came down the street,
The morning before the show,
It made me laugh to see the giraffe,
He blew a big horn, you known.

The monkey sat on the elephant's back,
And jingled a tambourine,
While rum-ti-tum went the big bass drum,
Round the elephant's neck 'twas seen.

But the grizzly bear in his striped suit,
Was the funniest thing in town,
He nodded, grinned, turned somersaults, too,
For he was the circus clown.

Acrobatic Clowns (accompanied by music of first song).

There were cartwheels, rolls, somersaults, flips, shoulderstands, knee-walks, and headstands.

Scene II

Song, "Picnic Time."

Words composed by the class especially for the occasion. Put to the tune of "When the Circus Comes to Town."

Summertime means picnic time,
Picnic time means happy time,
Happy time for all you girls and boys in the land.
It's the one thing you can't miss,
So you must remember this:

Chorus:

Better plan some little picnic trips
Take one to the nearest zoo.
For we see the monkeys do their tricks
And we feed them peanuts, too.
Then we go to see the elephants,
Watch them take their showers, too,
And near by the funny river horse
Floating on the water blue.
The polar bears will be there.
There're grizzly bears to see there.

How you will jump with glee there
As the long-necked giraffe bends down and makes you laugh.
Better plan a little picnic trip
Take one to the nearest zoo.
For you want to see the funny tricks
That the many animals do.

Picnic Group. Verse-choir numbers said by small groups in front of the cages of the various animals.

A REAL MOTHER *

I'd like a mother kangaroo
I think she's quite all right.
She never leaves her children,
She'll watch them day and night.

She always takes them with her,
And when she's asked to call
Please don't forget, when you invite,
To say, "Come one, come all."

She carries them against her heart,
That's where they ought to be
And when they need attention
She'll be right there to see.

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* Meigs, Jane, FEATHERS, FINS AND FUR, Smith Printing Company, San Jose, Calif., 1933.

And when the sun is tired
And sitting down to rest,
She has them folded neatly
Against her big warm breast.

She'll croon to them so sweetly
And take her usual leap.
This is the only way she has
Of rocking them to sleep.

She never leaves her babies,
As other mothers do.
She'll stick to them through thick and thin.
I think she's right, don't you?

THE LITTLE PRISONER*

Little Mister Monkey-man
Shut up in a cage,
I know you do not dance for joy
You're simply wild with rage.

You're sad when you remember
You once were gay and free
And loved to run and play about,
And leap from tree to tree.

How could they be so mean to you
And say, "Now, just for fun
We'll lock you up for something
You've never, never done."

Oh, little Mister Monkey-man,
If I could have my say
I'd break your prison bars, so you
Could up and run away.

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* Meigs, Jane, FEATHERS, FINS AND FUR, Smith Printing Company, San Jose, Calif., 1933.

● FIG. 38.—*Who can imagine a "zoocus" without clowns.*

THE CAMEL WHO WOULD NOT SMILE*

My stars, but you look haughty,
Why not be a little sporty?
I think it's very naughty
    Not to smile.

Don't you know there is a reason
In and out of any season,
Don't you know it's just treason
    Not to smile?

Although you are no beauty,
I feel it is your duty
To try and be less snooty
And smile, smile, smile.

THE BABY LION*

The sweetest sight I ever saw
A little lion cub.
He had such sleepy yellow eyes,
His paw was like a club.

I wish he never would grow big
And stay just as he came.
But really truly if he did,
I'd love him just the same.

THE ELEPHANT†

The elephant has the toughest skin
All wrinkled where the legs begin;
His eyes are tiny little eyes—
I don't suppose he ever cries!
He doesn't even seem to see
A little fellow small as me.

---

* Meigs, Jane, FEATHERS, FINS AND FUR, Smith Printing Company, San Jose, Calif., 1933.

† Hankins, Maude M., DADDY GANDER, The P. F. Volland Company, Chicago, 1928.

Balloon Dance and Song.—SONG BOOK NUMBER VII, page 22, Church-Grindell.

Seven girls in sun suits, carrying large balloons.

One, two, three,
Pretty balloons floating high;
Four, five, six,
Other gay bubbles sail by,
Big white ones and yellow and scarlet and green,
Orange and purple and blue ones are seen.
So up they go sailing,
Held up by a string,
Light as a feather
Soaring like birds on the wing.

Seven, eight, nine,
Fairy balloons light as air;
Ten, 'leven, twelve,
Dainty bright colors are there;
We toss them and catch them and jerk to and fro;
Now down and up our balloons gay will go.
So up they go sailing,
Held by a small string,
Light as a feather
Soaring like birds on the wing.

Animal Slides and Reports. These reports were taken from the stories of the children.

The Elephant

Can you imagine a baby weighing 200 pounds when it is born? Well, an elephant does. It takes him 30 years to grow up. And, he will probably live to be one hundred years old.

Whenever you see an elephant, you can tell what country he came from by the size of his ears. The elephants with the very large ears come from Africa. The ones with the smaller ears come from India.

The Indian elephants are the easiest to tame and train, so they are usually the ones that you see in the circuses.

Did you ever wonder why an elephant's trunk was called a *trunk?* The name is really *trompe,* a French word which means "trumpet," for the trumpeting sound that the animal makes. The elephant uses this trunk for breathing and smelling; to give himself a shower or dust bath; to pick up and carry things; and to protect himself.

These great big elephants are afraid of—guess what—little, tiny mice and insects. You see, they are afraid these little things will get up in their trunks, and their trunks are very sensitive.

The elephants live in herds of from 20 to 100. They like to eat grass, tender shoots, leaves, coconuts, yams and sugarcane. They sleep in the forest. When danger is near, the bulls trumpet a warning to the rest of the herd.

The mother elephant is a very good mother. She feeds her babies milk as a cow does her calf, and she keeps them with her until they are about seven years old. She usually has only one baby at a time and has one about every 10 or 15 years. Whenever she goes across a river, she carries her baby on her back. But when he is old enough to swim, she teaches him by pushing him in the water, even though he does squeal and say he does not like it.

The April Safety Posters that we had in our room said, "The Elephant Never Forgets." He never forgets a trick he has learned, and he never forgets if anyone is unkind to him. Years later he will punish the one who was unkind to him, or he may even kill him.

Don't you think these big old beasts deserve all the petting and peanuts they get? *But,* if you want to feed one, don't forget to ask his keeper if it is safe, and what he likes best. *And be careful not to touch his precious trunk.*

Class Story

The Whale

Whales are the largest animals we know. You probably thought that a whale was a fish, didn't you? But it isn't. It is an animal.

They feed their babies milk just as a cow does. And strangely enough, a mother whale is called a cow. The baby whale is called a calf, and the father is a bull.

The baby is from 12 to 22 feet long when it is born, and weighs 1 to 2 tons. It stays with its mother till it is a year old.

When whales are full-grown they get to be 75 to 100 feet long. (That is longer than our assembly hall.) They weigh 50 to 80 tons, as much as six or eight good-sized elephants. They live to be three hundred to five hundred years old.

Some whales eat fish, seals, sharks, and even other whales. Inside the huge mouth of the whale, there may be 20 to 40 little fish swimming about.

Whenever the whale opens his mouth to get food, the little fish get their food too.

The whale has a thick layer of fat under his skin that keeps him warm even when he is in the cold Arctic Ocean. He puffs himself up with air so that he can float. He looks like a huge balloon or a zeppelin.

Whales have been useful to man for many years. Some years ago whale oil was used in lamps all over the world. The oil is also used on coats and boots to make them waterproof. Very fine perfumes are made from a part of the whale, too.

Remember that a whale lives in the sea, but is not a fish.

Roy and Manuel.

The Kangaroo

If you have been to a zoo, you have probably seen those queer-looking animals, the kangaroos. These kangaroos come only from Australia.

The largest ones get about as tall as a man, and weigh about 150 pounds.

The front legs are much shorter than the large back legs. There is a very large toe on each back foot, and beside it a sharp claw, that the kangaroo uses to fight his enemies when he is attacked.

If an enemy as small as a dog should attack him, he takes him in his front paws, carries him to a creek or pond, and holds him under the water till he drowns.

He uses his tail for a chair, and for jumping. He can jump so high that he can easily jump over a horse.

When he is eating he can stand like a rabbit, or he may pick up his food in his front feet and eat like a squirrel. He likes to eat grass, roots and small plants. In the zoo he is fed vegetables, too.

The baby kangaroo is no longer than your little finger. When he is first born he cannot see or hear. He is very helpless. His mother puts him in her pocket where she feeds him and keeps him warm. He stays there about six months, then he pokes out his head.

He is then about as big as a rabbit. He thinks that the world is too large for him so he goes back into the pocket for a couple more months. When he comes out, he stays close to his mother and she trains him very carefully. When danger appears he "pops" into her pocket as quick as a wink.

There is a cousin of the kangaroo who lives in our country, the little opossum, from the southern part of our United States. He has legs all the same size and a head and tail like a rat, so that he does not look like a kangaroo, but he has a pocket like the kangaroo.

Really, these pockets are such a clever idea; it is a shame old Mother Nature did not give them to more animals.

Class Story

Prehistoric Animals

Hundreds and thousands of years ago many different kinds of animals lived here. This one is the ancestor of our elephant of today. He is called the mammoth. He weighed more than our largest elephants and stood 6 to 8 feet high. Notice, too, how much larger the tusks are. He has hair on his body, too, something that you find only on the baby elephants today.

You have probably seen pictures of dinosaurs that lived then. There were many kinds of them: the finbacked, the birdcatcher, the flesh eater, the three-horned, and some as small as rabbits. The word dinosaur means "terrible reptile."

There is another animal who lived then, the saber-toothed tiger. He was a fierce beast. He weighed more than our tigers do now.

If you ever go to Los Angeles, be sure to go to the museum and see the skeletons of these huge beasts and visit the tar pits out of which they were taken.

Betty Jean and Jimmie

Mr. Nosehorn

Mr. Nosehorn is the rhinoceros. The name rhinoceros is two Greek words "rhino" which means "nose," and "ceros" which means "horn." The elephant, hippopotamus and rhinoceros are the largest land animals. The "rhino" has very thick skin that is like armor and is such a huge beast that no other animal will attack a full-grown one. He has a horn that is more like a callous or a corn than a regular horn. It is made of tough hairs held together by a sort of glue. He has very small eyes and is shortsighted. His sense of smell is very keen so that he can tell when danger is near. The little tickbird is a feathered friend of the rhinoceros. He stays on the back of the "rhino" and eats insects that get in the folds of the "rhino's" skin. He gives a warning when danger is near. The "rhinos" live in India and Africa.

Class Story

The Deer Family

Most of the members of the deer family live in North America, but a few live in South America and Europe.

The one that you have heard the most about is the reindeer. He lives in the cold north. The Eskimos use him to pull their sleds, they use his leather for clothing and tents, they make spoons and toys from his bones, they eat his meat, and they drink the milk.

The father and mother reindeer both have horns. The father deer is called a buck, the mother a doe, and the baby a fawn.

Other members of the deer family are the mule deer that you have seen in Big Basin, the white-tailed deer, the moose, the caribou and the elk.

The babies are born in the spring. The mother usually has only one, but sometimes you may find twins. The babies are able to walk in a few hours after they are born. They are covered with spots until they are several months old. This protects them when they are lying among leaves.

You will be surprised to know that goats, sheep and cattle belong to the deer family, too.

Rosie, Lillian, and Wayne

The Ship of the Desert

The Ship of the Desert is the camel. He is called this because he rocks from side to side and his passengers sometimes get sick as they get seasick on a boat.

He carries supplies as well as people. He can store fat in his hump and extra water in folds in his stomach so he can go without water and food for several days. This makes him very valuable to the people. Other than this they use his meat for food, they drink the milk, make shoes from his leather, and weave cloth from his hair. The finest paintbrushes that we can buy are made from camel's hair, too.

The camel is built so that he can live easily on the desert. His eyes are protected by thick eyelashes, his nose has small slits that he can close in a sandstorm, and his feet are broad and flat so that he can walk without sinking into the sand. He has tough thick lips that help him to eat any little brush or twigs that he finds. He can even swallow thorns without making a face.

There are two kinds of camels. The Bactrian camel, that has two humps, lives in Asia. He has long hair, too, that protects him from the cold weather. The camel of the African desert has only one hump and is called the dromedary.

Jimmie I.

The River Horse

This is the river horse or hippopotamus. The word hippopotamus comes from two Greek words, "hippo" which means horse, and "potamus" which means river. He lives in Africa. He gets to be 11 or 12 feet long and weighs 8,000 pounds or 4 tons. He has very short legs, no neck, and a very, very large mouth. He likes to eat sugarcane, tender twigs, reeds and roots. Most of his time is spent in the water swimming, floating and water walking. (Water walking means underwater.)

The mother teaches the baby to swim when it is very young. She carries the baby on her back when it gets tired. If the baby should fall off, the mother would dive under it and come up with the baby on her broad back. The little “hippos” make good pets and are easily tamed.

Class Story

Conclusion

This concludes our program for today. We hope you have enjoyed it.

If you are interested in learning more things about these animals, you can find material about them in our Lincoln library. We are planning to have an animal exhibit in the library for two weeks, beginning next Monday. There will be borrowed books as well as our own Lincoln library books, pictures and even notebooks made by boys and girls of our class.

Thank you.

An unexpected number of primary boys and girls attended the performance and they became rather restless during the slide reports. If the program were to have been repeated, the slides and reports should have been given at the beginning of the program.

Admission receipts collected from the program amounted to $6, a fine sum, but a long way from $40, or even $20. It had been great fun and was well worth while, but the children felt that they should earn $15 or $20 at school to help the cause along. They wanted very much to go to the zoo.

A report from Aunt Polly’s page in one of the city newspapers, written by a fifth-grade girl, is given:

“ZOOCUS”

The high third and low fourth graders gave a play last Friday which was called the “Zoocus.” They started off by singing “When the Circus Comes to Town.” The verse choir told us about elephants, camels, monkeys, kangaroos and other animals. The girls danced with balloons. As they danced they sang a song. The clowns came out and did tricks. The children made $6. The scenery was drawn by Charles Marotta and Rosie Cota. The children of the high third and low fourth grades made notebooks about animals which they

● FIG. 39.—*Making an animal quilt for Junior Red Cross.*

WILD ANIMALS
ANIMALS
Zoo
Circus

have placed in the library. There were slides showing the camel, hippopotamus, deer, elephant, a whale, a kangaroo and a rhinoceros.

Jeannette Drouet, Reporter

EARNING MORE MONEY

As the days passed it began to look as though $40 was an unattainable sum for youngsters who came from the types of homes that were represented in the room. Some of the children suggested private cars, but, when they checked up the following day, there was not one child in the room who could furnish a car.

Then one day a new idea dawned. The boys in the Nature Club had gone on a field trip to Alum Rock Park (about 4 miles out of the city) in a big sedan which was substituting for the regular bus to the park. Now, if the sedan could take the run for the bus, and they could rent the bus for the day. . . . ! The children wrote a note to the bus owner telling of their hopes and their financial condition. The answer stated that the trip could be taken to the zoo for $17.50; the bus would hold 26 or 28. Since the student teacher had a sedan available, the remainder of the class could go with her.

The class had $6 from the "Zoocus" and the children thought they would be able to bring about $9 among them. They still must earn $3 or $4 in some way. A paper drive had been suggested but nothing had been done about it when the trip was uncertain, though several had started collecting. Now they went ahead rapidly with it. They had Friday, Saturday and Sunday to collect, and Monday and Tuesday to bring the paper to school. When the receipts came back from the paper company, they found that they had collected about 2,800 pounds, which brought $5.60.

PLANS FOR A TRIP TO THE ZOO

Immediately the children began making plans and preparing for the big day. They wrote a letter to the director of the zoo. It is shown at the top of page 173.

Every day the children asked if a letter from the zoo had arrived yet. On Monday, when it did come, everyone was so excited that Thursday seemed a long way off.

San Jose, California
June 4, 1936

Director of Zoo
Fleischacker Park
San Francisco
California

DEAR SIR:

The boys and girls of the high third and low fourth grades of Lincoln School are planning to visit Fleischacker Zoo on Thursday, June 11th. We have been studying animals for the past several weeks and feel that a trip to the zoo would be the best ending we could have for our study.

We will stay at the zoo from 10:30 A.M. till 2:00 P.M. Will we get to see the animals during that time? And, would it be possible to have a guide to answer our questions and tell us new things?

Sincerely,
Boys and girls of the high third and
low fourth grades, Lincoln School

Mrs. Leah Rhodes
Lincoln School
San Jose
California

DEAR MADAM:

We shall be glad to furnish you and your school classes with a guide to the Fleischacker Zoo on Thursday when you plan to visit the zoo. Mr. Fred Chatten, the head keeper, will take you around. He can be found at the Service Yard or storehouse situated about the center of the west side of the Zoo Oval. As we regularly feed the carnivorous and monkeylike mammals from 1:30 to 2:30 P.M. daily those hours are preferred by most visitors as the animals then exhibit more activity than at other times.

We look forward to your visit on Thursday, June 11th.

Sincerely yours,
EDMUND HELLER
Director

These parent's consent slips were sent home and were to be returned by Wednesday, the day before the trip.

Dear Parent:

Mrs. Rhodes is taking her class on a trip to Fleischacker Zoo in San Francisco on Thursday, July 11 from 8:30 to 3:30. We are going by bus.

The children will be supervised all the time and every care will be taken to avoid accidents. However if an accident occurs the school will not be responsible.

Please sign your name to this notice if you are willing for Jimmie to go with the rest of the class on the trip.

Parent's Signature

Cost of this trip is (varied with each child)

Bring sweater
lunch

The whole trip and events of the day were plotted out. At the teacher's suggestion the "buddy system" (as in swimming) was adopted, so each child chose a partner with whom he was to stay all the time and for whom he was responsible (and vice versa). (Two people would be more quickly missed than one in case any of them got separated from the group.)

Rules for the entire trip were discussed and formulated.

Rules for Conduct

1. Follow instructions and pay close attention when orders are given.
2. Be considerate of others.
3. Be clean and neat.
4. Keep your voices down.
5. Keep with the group.
6. Don't cause confusion.
7. Don't be a tatler.

On the Way

1. Get a seat and stay there.
2. Don't disturb the driver.
3. Don't put your head or arms out of the window.
4. Don't throw anything out of the windows.

At the Zoo

1. Obey zoo rules.

2. Remember our rules of conversation when asking questions or telling facts.
3. Tall ones be considerate of the short ones.
4. Keep with your "buddy."

Lunchtime

1. Go to the lavatory and wash up before lunch.
2. Get a drink of water.
3. Sit while you eat.
4. Eat slowly and quietly.
5. Put rubbish in garbage cans.
6. Remember you can buy only ice cream.
7. When you play on the playground equipment *be careful.*

Rules for Conversation

1. Don't interrupt.
2. Include everyone in the group.
3. Don't contradict rudely.
4. Don't do all the talking yourself.
5. Be a good listener.

What to Look For in the Animals at the Zoo

Appearance—size, fur, feet, teeth, eyes, ears.
Food.
Actions.

Since the trip was primarily one to see animals, and since there were many who could not bring extra dimes and nickels the children were told that they would not be given an opportunity to ride on the merry-go-round, donkeys or little train. However they were told that, if time permitted, they would have a chance to play on the bars, swings and slides.

To avoid any sickness, suitable lunches were planned, and the children were told that if they did want to bring an extra dime or nickel they would be permitted to buy only ice cream (not pop, peanuts, popcorn, hot dogs or candy), and two or three bags of peanuts in the whole group to feed the elephants. The weather was discussed and, knowing the cool breezes that blow off the ocean near the zoo, the children decided that each one must bring a heavy sweater or coat.

There were 8 children out of the group of 38 whose parents would not give their consent for such a long trip. Those children were assigned to the fourth- and fifth-grade rooms for the day.

A TRIP TO THE ZOO

Eight forty-five Thursday morning found 30 shining-eyed children waiting at the gate, each with his sweater or jacket and his lunch marked with his name. The lunches were all put in the student teacher's car in boxes (so that they could be carried easily from the car to the spot where they were to be eaten) and five children were assigned to her car.

The bus driver was a few minutes late, but the journey finally started. Everything along the way seemed of interest, the cities, the houses, busses, automobiles with foreign license plates, Santa Clara Mission, Stanford University, the clouds and the trees. The children entertained themselves and their neighbors by watching the mileage signs along the way and deciding how much farther they had to go.

When they arrived at the zoo, they went to the rest rooms, then to the office of Mr. Chatten. When they found him, his pockets bulged with apples and peas for treating the animals that would perform for the visitors. Although the monkeys usually attract the most attention the children showed great interest in the polar bear, kangaroos and camel.

It was interesting and gratifying to hear comments such as these:

[By the camel pen] " 'My stars but you look haughty . . . ' [Excerpt from poem used in "Zoocus"] Doesn't he, Mrs. Rhodes?"

"Look at his big flat feet. They're like snowshoes."

"A camel is a mammal. Are those the milk bags up near the front legs?" [One camel was stretched out on its side.]

"See how his nose slits are made so that they can be closed in a sandstorm!"

"Look at his long eyelashes."

"This one is a dromedary; it has one hump."

[By the monkey cages] "I'd know that one came from Africa because he has pouches."

"Look at the baby monkey holding on to its mother. It's a mammal, isn't it?"

"Mr. Chatten said that these monkeys' mother bit off their tails when they were babies. She does it to all of her babies."

"The fur on that baboon looks like a cape when he sits down."

"Isn't 'Jim' [the orangutan] lazy! He lies down nearly all the time."

"I wonder if he and the baboons [in his cage] ever fight?"

"Look at this chimpanzee. Isn't that the kind we read was the most like humans, and that they raised with that little baby?"*

"Look at that monkey swinging by his tail. It looks just like another leg."

"When he gets the peas, he shells them and doesn't eat the pods."

[By the kangaroo pen] "Mr. Chatten says there's a mother in the shed with a baby."

"He's going to get it to come out."

"Look at the big pouch hanging down. The others don't look like that."

"Well, she is carrying a baby in there."

"Oh, look! Look! He popped his head out."

"Doesn't it look funny when the baby's head is out and nearly touching the ground?" [When the mother walks on all four feet, instead of the back ones alone, the opening of the pouch comes nearly to the ground.]

"Look how much bigger the other kangaroos are than these two."

"The big ones are males, don't you think?"

Comments such as these were heard at nearly every cage, so those who did not have very sharp eyes or who were not very inquisitive had their attention called to interesting facts at every turn.

The children were so fascinated with the animals and birds that even though they were getting quite hungry they looked and looked until 12:30. Then they went to the rest rooms and washed for lunch. When the lunch monitors arrived with the box full of lunches, they formed a circle on the lawn, ate and chatted.

Over half of the children brought money for ice cream. Their money was collected and enough added to it to get ice-cream cups for everyone. Several sacks of peanuts were bought for the elephants, too.

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* Kellogg, Winthrop Niles, THE APE AND THE CHILD, McGraw-Hill Book Company, Inc., New York, 1933.

Watching the animals eat was a high point of the day. The children were tremendously impressed by the savage manner with which the big cats pounced upon their chunks of horseflesh and thoroughly fascinated with their first opportunity of offering peanuts to the elephants.

Although they would have enjoyed staying for hours, they had to be ready to leave by 2:00. They hurried back to the entrance and boarded the bus, proudly carrying their souvenirs—a peacock feather and strands of hair from "Jim," the orangutan, given to them by Mr. Chatten.

There were many things to talk about on the way home. When conversation lagged (due to fatigue) they entertained each other with "Pease, Porridge, Hot," and "Scissors, Stone, Paper," or by singing favorite songs.

When the bus arrived at school, it was just 3:30. Everyone agreed it was the happiest school day he had ever spent.

DISCUSSION THE MORNING AFTER THE TRIP

TEACHER. This morning I know the boys and girls who did not get a chance to go to the zoo are very anxious to hear about the things that we saw and did. If you people who did not get to go have any questions to ask, you ask the children who went.

MATTHEW. I think the most interesting thing was Jim, the orangutan. The head keeper, Mr. Chatten, threw apples up on top of the cage and told Jim, "Go get it, Jim," but Jim was too lazy and a mother baboon and a little baby baboon ran up and got it. He threw two apples up and then the third apple he stuck in the bars on the side. He kept telling Jim, "Go get it, Jim." When Jim went after the third apple, he made a funny noise to the baboons, telling them to get away because he wanted it. While he was hanging upon the bars, the mother baboon took hold of the fur on Jim's hind leg and pulled and yanked.

ROY. We saw two lions, a mother and a father lion. They came to the zoo on Bert's birthday, June 22.

BETTY JEAN. How many of you think it would be a good idea to write a letter to Mr. Chatten to thank him for taking us around?
(A vote decided that the letter was to be written.)

As the reports continued the children who had not been able to go to the zoo learned that:

The elephants, some monkeys, a raccoon and a bear did tricks for Mr. Chatten and were given food from his pocket.

The zebra barked, and a big, gray bird kept making a sound like, "Help, help."

Mr. Chatten opened an elephant's mouth to show his teeth.

One of the elephants, called "May," was only four years old.

The monkeys were scratching each other and eating the scales (not fleas) that they scratched off because they liked the salty taste.

There was a mother kangaroo with a baby in her pouch who poked out his head and arms once in awhile.

Horse meat was fed to the carnivorous animals.

OUTCOMES OF THE ZOO EXCURSION

The remarks during the trip and the discussion the following morning showed that without a doubt the trip had been a huge success. It was gratifying, too, to learn that parents and friends also felt that it had been a worth-while experience.

It was decided that a thank-you letter should be written to Mr. Chatten, because " . . . he was so nice to us, and told us so many interesting things." The following letter was dictated by the members of the class:

San Jose, California
June 15, 1936

Mr. Fred Chatten
Fleischacker Zoo
San Francisco
California

DEAR SIR:

We enjoyed very much our trip to the Zoo. We sincerely thank you for taking us around and telling us about the animals. The boys and girls who could not go were interested in the souvenirs that we brought back. We also thank you for letting us feed the elephants and the prairie dogs. We were interested in the many kinds of birds, because we had not seen or heard about many of them.

We hope we can visit the Zoo again many times.

Sincerely,
Boys and girls of the high third and low fourth grades, Lincoln School

Exciting Events at the Zoo

Many of the children watched the papers daily for news about animals, but no one could help hearing about the exciting events that took place at the zoo less than a week after the trip.

Blaring headlines—ELEPHANT KILLS KEEPER AT SAN FRANCISCO ZOO, ELEPHANT TRAMPS ON MAN, ELEPHANT KILLS KEEPER, MUST DIE—and huge pictures told the horrible story of the elephant's attack.

The children had seen "Wally," had remarked about his one tusk and his chained leg, and had fed the other elephants who were free to roam about the enclosure. They had felt sorry for him all alone there and had wondered why he was not allowed to roam about. When the news came of his attack, they were greatly concerned.

The morning that the children brought the news to school, their clippings from the papers were read and a long discussion ensued.

Some of the remarks were:

"*Pachyderm* [a term used in the newspapers] means thick-skinned. I looked it up in the dictionary."

"*Gored* means the same thing as in a bull fight, doesn't it?"

"I wonder if the keeper had been mean to him and Wally just decided to punish him. *An Elephant Never Forgets*, remember our safety poster?" [Reference is to one of the monthly posters sent to schools by the California State Automobile Association.]

"I thought his tusk was chained to his leg. I don't see how he [speaker paused to be sure of new word] gored him."

"I wish we could have his tusk as a souvenir."

"Oh, no! It's valuable. They'll probably make piano keys out of it."

"Wouldn't it be nice if we could have his ear as a souvenir?"

"Oh, we couldn't have anything like that!"

"Well, Mr. Chatten gave us some of Jim's hair, didn't he?"

"Yes, but that's different."

"I don't think he can be trusted now."

"They're going to shoot him tomorrow."

"No, the paper said they decided to wait."

"I'm glad we weren't up there the day it happened."

"Let's write a letter to Mr. Chatten."

"Yes, let's do."

This is the letter that they dictated. It voiced the opinions of the entire class:

San Jose, California
June 18, 1936

Mr. Fred Chatten
Headkeeper
Fleischacker Zoo
San Francisco
California

DEAR SIR:

We were sorry to hear about the terrible accident that happened at the zoo. We wish that we could have the elephant as a pet, but we have no room for him at school. He would probably go through the floor. We could not afford him because he eats too much and, after the accident he had, we feel that he could not be trusted now.

The boys and girls of our room wish that Wally could be given another chance. We wish that Dr. Doolittle (a character in an animal book we have read) were here and we know that he would take Wally and give him a good home. Wally probably was jealous because the people were feeding the other elephants and he just had to look on.

Very sincerely,
Boys and girls of the high third and low fourth grades, Lincoln School

The next day the news of Wally's execution was received with varying responses.

The Best Unit Ever Experienced

The end of school was at hand, the unit had been climaxed by the zoo trip, but the interest in animals was only budding. To the teacher as well as the pupils it had been the most fascinating unit they had ever experienced.

SOME SPECIFIC OUTCOMES

Following are some of the more important outcomes that resulted from the study of animals:

I. Appreciations and attitudes.
   A. A growing appreciation of all species of animals.
   B. A new love and admiration for animals.
   C. A beginning realization and appreciation of the importance of animals in our scheme of life.
   D. A broader realization of the worth and enjoyment of working together.
   E. A greater consideration for the opinions and feelings of others in the group.
   F. A real pleasure in preparing and presenting things for the enjoyment of the group.
   G. A definite desire to learn something about every animal that is contacted.
   H. A growing questioning attitude.
   I. A beginning appreciation for the work of the scientist.
   J. A beginning appreciation for the remarkable way in which the animals are adapted to their environments.
   K. A greater appreciation of the pleasure and information that zoos, museums and circuses bring.

II. Knowledge of:
   A. Numerous kinds of animals and their characteristics.
   B. The homes and habits of animals.
   C. A few scientific terms, their meanings and sometimes their derivations.

Fig. 40.—*These children are checking the "homes" of animals they have studied.*

OUR WORLD

D. A few of the ways in which scientific materials are collected, recorded and exhibited.
E. The importance of good care of pets.
F. The equipment and money necessary to create and maintain zoos, museums and circuses.

III. HABITS AND SKILLS.

A. Increased speed in reading.
(The desire to delve into the facts about animal life had fostered much reference work. When the reading tests were given at the end of the semester the resulting scores were most gratifying, for, although there had been very little remedial and drill work, even the slowest ones in the class had made the standard improvement and several showed surprising advancement.)
B. Greater ease in speaking and writing.
C. Improved ability in:
    1. Looking up answers to questions.
    2. Finding new materials for reference or illustration.
    3. Gaining confidence in conversational groups.
    4. Abiding by rules in conversation.
    5. Making illustrations if those available were too small or inadequate.
    6. Using equipment successfully, *e.g.*, film-strip projector, slide projector and stereopticans.
    7. Cooperating in work and play.

SECTION II. SUBJECT MATTER AND METHODS

PRODUCERS' ENTERPRISES

I. MAKING REPORTS.

In the following, List I includes the animals that were chosen first because they were the best known to the members of the group. As reference work advanced, new names were suggested for the next lists. List IV was made up entirely of reports that the children asked to make, while the reports in the first list were guided. The names of the animals in List I were put on the board as they were suggested and each child, after having a little time to decide on which one he wanted, was asked which exploring group he wanted to be with. When the groups were decided, each group appointed one of its members as its head explorer.

SCHEDULES FOR EXPLORING TRIPS

List I

Elephant	Teacher, 1 girl
Monkey family	3 boys, 4 girls
Giraffes	4 boys, 2 girls
Cat family	2 boys, 5 girls
Reptiles	3 boys
Rhinoceros	2 boys
Hippopotamus	1 boy, 2 girls
Crocodile	1 boy, 1 girl
Kangaroo	3 boys, 2 girls

List II

Bears	3 boys
Prehistoric animals	2 boys, 2 girls
Dog family	2 boys, 2 girls
Hyena	2 boys, 1 girl
Camel	2 boys, 1 girl
Horse family	2 boys, 2 girls
Solth	1 boy
Anteater	1 girl
Tapir	1 boy, 1 girl
Bat	1 boy, 2 girls
Goat	1 boy, 3 girls
Sheep	2 boys, 2 girls
Deer family	1 boy, 2 girls
Buffalo	2 boys, 1 girl

List III

Rabbit	3 boys
Whale	2 boys
Raccoon	1 boy, 1 girl
King Snake	1 boy
Gopher Snake	2 boys
Horned Toad	2 boys
Monarch Butterfly (life history)	6 boys, 4 girls
Swallowtail Butterfly (life history)	1 boy
Jumping Mouse	2 girls

List IV

Okapi (rare antelope, interior African jungle)	1 boy, 1 girl
Mole	2 girls
Klipdas (South African animal that resembles a pygmy rhino)	1 boy, 1 girl
How animals protect themselves	2 boys
Prairie Dog	2 boys

Flying Fish	2 boys
Dingo (wild dog of Australia)	2 boys
Turtle	1 girl
Trip to Zoo	entire group

II. MAKING A WORLD MAP.

A. Materials.

1. Oilcloth, 48 by 60 inches.
2. Green and yellow crayons for outlining.

B. Methods.

1. The map was outlined on oilcloth by using a projection lantern with a slide of a world map; the map was projected on the oilcloth and then outlined with yellow and green crayon. The names of the countries and waterways were printed on it by the student teacher. As the children reported on different animals, the artists made tiny paper drawings of the animals and pasted them on the map in their native areas. The map was put on a large frame supported by sawhorses in the center of the room, where it could be consulted as the work progressed.

III. MAKING AN ANIMAL BORDER.

A. Materials.

1. Yellow shelf paper.
2. Green-blue construction paper.
3. Drawing paper for the animals and trees.

B. Method.

1. The yellow shelf paper was pinned to the board, making a background for the border. The blue-green construction paper was used for the ground and, as the children reported on the animals, they made large drawings of each animal during their art period and pinned them to the border. The border was divided into areas for the different types of animals: Zoo Animals, Circus Animals, and Wild and Tame Animals.

● FIG. 41.—*Animal designs make good notebook covers.*

IV. MAKING INDIVIDUAL ANIMAL NOTEBOOKS.
  A. Making covers for notebooks.
    1. Materials.
      a. Lightweight butcher paper.
      b. 2-inch templates.
      c. Crayons.
    2. Directions.
      a. Cut butcher paper into pieces 24 by 12 inches.
      b. Square off with template.
      c. Make designs first on scrap paper (animal figures).
      d. Apply design to alternate squares with crayons.
  B. Preparing stories for notebooks.
    1. Preliminary.
      a. Stories read orally or silently.
      b. Pictures studied.
      c. Organized reports given.
      d. Discussions.
    2. Writing.
      a. Stories written by group as a whole.
      b. Stories written individually.
      c. First paragraph written by group and story finished individually.
  C. Pictures.
    1. Animal pictures were studied as art lessons and drawn for notebooks.

Samples of Individual Stories Written for the Animal Notebooks

The Giraffe

I have been exploring for the giraffe. I found out so many interesting things about him.

I found out that the giraffe has a very long neck and when he is grown up he has seven bones in it.

I also found out that the giraffe's enemies are the leopard, lion and hunter.

Gloria Moro

The Cat Family

The wildcat is really only a large cat. His teeth are like those of the cat, but his fangs are much sharper. He sharpens his teeth by biting on the bark of a tree. He uses his fangs to tear the meat he eats. The wildcat's paws are like the cat's too. He keeps these sharp by clawing trees. His eyes are large and he can see far at night just as the tame cat can.

These are some other members of the cat family that are like our house cat: leopard, tiger, lion, panther, puma and jaguar.

Wayne Nadeau

Other samples are found in the "Zoocus" slide talks, and in the Lincoln *News.*

V. WRITING STORIES AND MAKING PICTURES FOR THE LINCOLN NEWS.

Monkeys

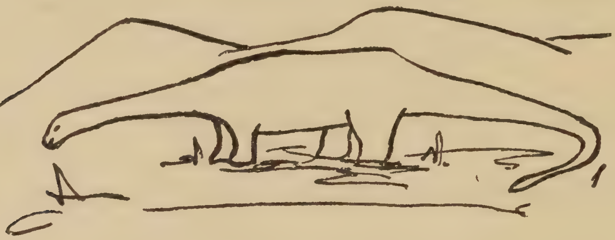
In the monkey family there are these animals—a chimpanzee, an orangutan and a baboon, a gorilla and an ape. The monkeys with long tails come from South America, and the monkeys with short tails come from Africa. A monkey is a very important animal. It can do many tricks and stunts. They like coconuts and popcorn and their babies like milk. Milk baby monkeys. It makes them strong.

Wayne Nadeau

More About Monkeys

When we went around the jungle, I heard a noise. I looked behind me and guess what I saw? There was a mother monkey and her baby. My men and I got a net and threw it around the monkeys. We found a village of five monkeys. After exploring, we came back to the United States and sold them to the zoos and circuses.

Donald Way



Prehistoric Animals

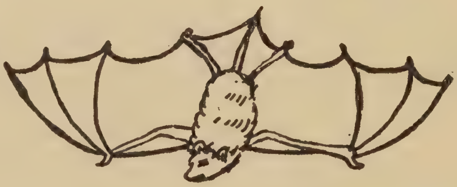
Hundreds and thousands of years ago, many great large animals and midget ones lived on this earth. There were mammoths who were related to our elephants. Many kinds of dinosaurs, the finbacked, the birdcatcher, the flesh-eating, the three-horned, and ones as small as rabbits were here. Dinosaur means terrible reptile. There were huge saber-tooth tigers, giant vultures called Teratornis, large short-faced bears, and many others.

The scientists have learned these stories from rocks, the frozen countries, and the tar pits.

James Hackett

The Bat

The bat is not a bird as many people think, but it is a mammal. It has a hairy body and feeds its babies on milk as a mouse, a cat, or a dog does. The mother bat does not have a nest but carries her babies in her pocket like a kangaroo.



There are two kinds of bats, the ones that eat insects and the ones that eat fruit. They usually get their food at night. You have probably seen them near the street lights at night catching the insects that are attracted by the light. They sleep in the daytime hanging upside down from branches.

In the hot countries there are vampire bats that suck blood from animals. The bats live in most countries except where it is very cold.

Class Story

The River Horse

The river horse is a hippopotamus. The word hippopotamus comes from two Greek words "hippo" which means horse and "potamus" which means river. The hippopotamus is very large. He weighs about 5 tons. The big fat hippo can float on the water. He can also do a water walk. The baby hippo rides on its mother's back when she goes for a swim. The favorite food of the hippo is sugarcane. He also likes root and twigs of trees and reeds.

Donald Way

The Baby Kangaroo

The baby kangaroo is no longer than your little finger. When he is first born he cannot see or hear. His mother puts him in her pocket where she feeds him and keeps him warm. He is now as big as a rabbit. He thinks that the world is too large for him so he goes back into his mother's pocket for two more months. When the baby kangaroo grows up he eats grass. He jumps on his hind legs over great distances. He uses his tail to balance himself.

Elaine Giussi

VI. Taking excursions.

A. To the theater.
B. To the city library.
C. To the zoo in San Francisco.

VII. PREPARING "ZOOCUS."

- A. Making the scenery.
    - 1. Materials.
        - a. Wide butcher paper.
        - b. Paste.
        - c. Colored chalks.
        - d. Paint brushes and water.
        - e. Frosted slides and projector.
    - 2. Method.
        - a. Paste butcher paper to make desired size for back drop.
        - b. Draw design (freehand or by projecting) on back drop.
        - c. Color with chalks.
        - d. Go over colors with brush dipped in water (makes the colors more permanent).
- B. Creating the rhythms.
- C. Creating the animal mimetics.
- D. Practicing acrobatics.
- E. Learning poems (verse-choir method).
- F. Learning songs.
- G. Creating an original verse for a song.

The need was felt for a song about the zoo. The children had the circus song, "When the Circus Comes to Town," so they created a second verse for it incorporating what they had learned about the zoo.

- H. Preparing the slide talks.

Individual and group stories were combined and amplified.

- I. Preparing the introduction and conclusion.
- J. Making elephant costumes.

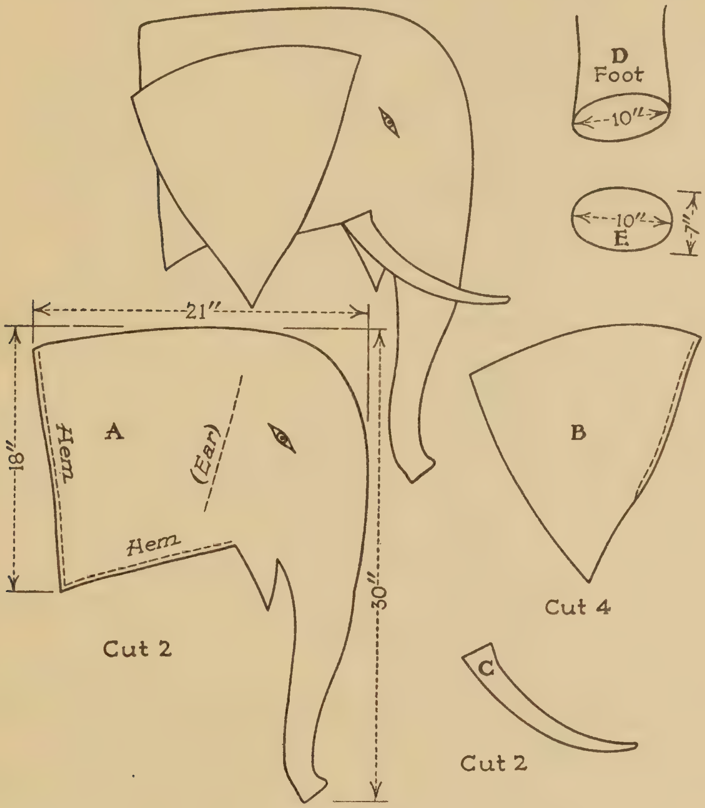
Elephant Pattern

Materials.

1. Gray paper cambric.
2. White cardboard.
3. Two large buttons.

Method.

Body. The body was made over the regular animal-body pattern used for rabbits, cats and bears. The paws, however, were changed to resemble the large feet of the elephant. The arms and legs were cut larger than usual and a flat circle was added at the bottom of each



● Fig. 42.

(see illustration *D*). A circular piece of cardboard of the same shape was inserted to make a sole and to help keep the shape (illustration *E*).

Head. Two pieces of part *A* were cut and sewed together (except where indicated by "Hem") and turned inside out. The ears *B* were made double to give them more body and were sewed on to part *A* as indicated.

The eyes were made of large buttons and the tusks of white cardboard.

VIII. HAVING A PAPER DRIVE.

IX. EARNING MONEY AT HOME.

- A. Doing household duties.
- B. Gardening.
- C. Selling papers and magazines.
- D. Having lemonade stands.
- E. Selling junk.

X. MAKING CHAIRS AND TABLES.

- 1. Materials.
  - a. Scrap lumber and boxes.
  - b. Sandpaper, hammer, nails, saws.
  - c. Shellac.
  - d. Enamel.
  - e. Brushes.
  - f. Turpentine.
- 2. Method.
  - a. Pieces for the chairs were planned, cut and assembled.
  - b. Sandpapered.
  - c. Shellacked.
  - d. Sandpapered again.
  - e. Painted.

(Arms were planned for the chairs, but when one of the big boys, who was working on them, learned that he could not get into the chair with arms on it he decided to have an armless chair.)

  - f. The tables were upturned boxes finished as the chairs were.

XI. MAKING PADS FOR THE CHAIRS.

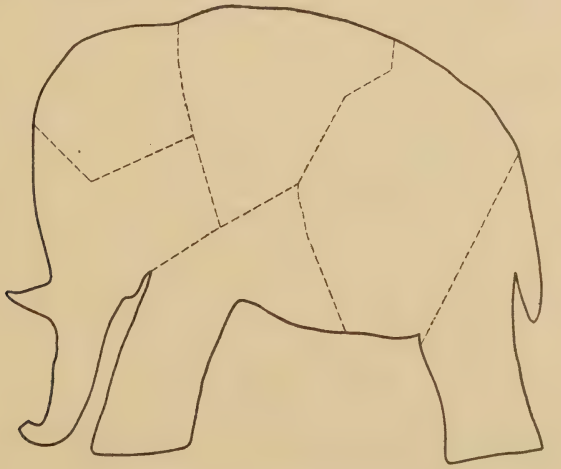
- 1. Materials.
  - a. Light yellow percale.
  - b. Blue bias binding.
  - c. Old comfort.
- 2. Method.
  - a. Measurements of seats and backs of chairs were taken.

  - b. Padding made of an old comfort was used.
  - c. Squares to fit were cut, put together with padding between and bound with the bias tape.
  - d. Pads were fastened on the seats with ties.
  - e. Pads were fastened onto the backs with thumbtacks.

XII. MAKING AN ANIMAL QUILT.

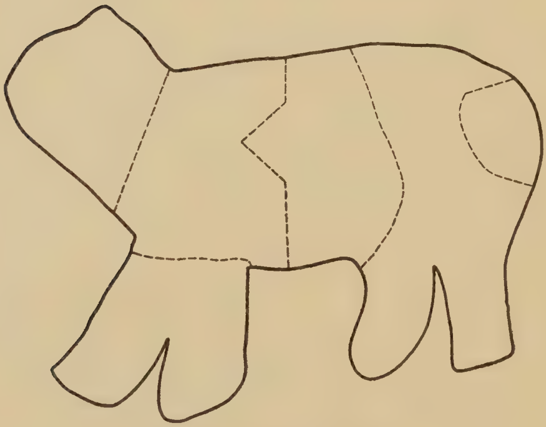
- 1. Materials.
  - a. Percale in blue, yellow, orange, red and green.
  - b. Embroidery thread and needles.
  - c. Original animal patterns.
  - d. Outing flannel.
  - e. Bias binding.
- 2. Methods.
  - a. Percale cut into 6-inch squares.
  - b. Animal designs traced on squares.
  - c. Animal designs embroidered with small backstitch.
  - d. Blocks sewed together.
  - e. Padded with three thicknesses of outing flannel.
  - f. Lined with plain yellow percale.
  - g. Bound with yellow bias binding.

XIII. MAKING ANIMAL PUZZLES.



● FIG. 43.—*Elephant puzzle.*

1. Materials.
    - a. Scratch paper.
    - b. Scissors and pencil.
    - c. Tagboard.
    - d. Crayons.
    - e. Ruler.
    - f. Envelopes.
2. Method.
    - a. Original pattern drawn on scratch paper.
    - b. Pattern cut out.
    - c. Pattern traced on tagboard.
    - d. Outlined with black crayon (a help in assembling pieces).
    - e. Animal colored.
    - f. Cut into five to ten pieces.
    - g. Pieces put in manila envelope.
    - h. Envelope labeled with:
        - (1) Number of pieces.
        - (2) Name of child.
        - (3) Picture of animal.



● FIG. 44.—*Bear puzzle.*

XIV. MAKING ANIMAL DESIGNS FOR ERASER COVERINGS.

1. Materials.

    - a. Oilcloth.
    - b. Glue.
    - c. Construction paper.
    - d. Scissors.
    - e. Patterns (original).
- 2. Methods.
    - a. Oilcloth measured and cut to fit top of eraser.
    - b. Oilcloth glued onto eraser.
    - c. Animal designs cut from construction paper.
    - d. Designs glued onto oilcloth covering.

CONSUMERS' ENTERPRISES

I. ENJOYING REPORTS AND DISCUSSIONS.

When the discussions first started many children were reticent, and when reports were made the material was often sketchy and poorly organized.

The following discussions have been organized with the idea of showing the way the children handled situations and of demonstrating the evidences of improvement as the work advanced.

A. "The Bear Family."

After a short report on the bears, the following ensued:

IDA. I have a story of the raccoon, he is a cousin to the bear.

(*Story read by Ida.*)

CHILD. What is a 'coon, Ida?

IDA. They call it 'coon for a short name. What does the raccoon eat?

CHILD. He eats birds' eggs. He eats fish and mice.

TEACHER. Can a 'coon climb a tree?

CHILD. Yes.

IDA. Did he rob the bird's nest?

CHILD. Yes.

IDA. What else does he eat?

CHILD. Fish and corn.

Ida. He eats—in this story—berries and wild grapes and he eats the sugar, too. He dips it in the dirty water and all the white sugar is gray.

Child. I saw one—he eats dog food. He don't look at it. He just feels it and eats it.

Ida. Who wants to ask some more questions?

Betty Jean. Do they eat frogs?

Child. Yes, that's what it said in the story.

Roy. The 'coons have little black masks over their eyes.

Teacher. I've heard him called a bandit raccoon. That's a good name isn't it?

Child. Yes, 'cause he steals eggs and wears a mask.

Frank. I have something about the grizzly bear. It says under this picture "The Grizzly Bear and the Cubs." Does anybody know the way the baby grizzly bear plays?

Joe. They "rassle" each other and knock each other down. They use their paws and "sock" each other with them.

Frank. What is the biggest bear?

Rose. That's the grizzly bear, isn't it?

. . . .

B. "Highboy, the Educated Giraffe."

The class had been told that an educated giraffe would visit the room. Since the giraffe had no voice they would need to ask him "Yes" and "No" questions.

Ida. Now we will introduce Highboy, the Giraffe.

Giraffe walks to center of room, bows.

Ida. You may ask him some questions.

Donald. How do you do, Highboy the Giraffe?

Giraffe bows.

Jimmie. If a tiger jumped on you, Highboy, what would you do?

Ida. You will have to ask Highboy questions that he can answer yes or no.

Ramona. If a tiger jumped on you, would he hurt you?

Giraffe nods yes.

JOHN. Do you eat sugarcane?

Giraffe nods yes.

JIMMIE. Highboy, have you five bones in your neck?

Giraffe nods no.

JIMMIE. Have you seven bones in your neck?

Giraffe nods yes.

MARY. Highboy, is a tiger your enemy?

Giraffe nods yes.

BOB. Do you like to eat tree leaves?

Giraffe nods yes.

BOB. How do you run when an enemy is coming?

Giraffe runs.

MRS. RHODES. Show us what you would do if a tiger came to fight you.

Giraffe demonstrates by backing up against wall and kicking.

JOHN. How old are you, Highboy?

Giraffe taps eight times.

THOMAS. Highboy, how long do you live?

Giraffe taps 20 times.

BEVERLY. Have you got good eyesight?

Giraffe nods yes.

LOUISE. Is a zebra one of your friends?

Giraffe nods yes.

JUNE. Would somebody slide off your back if they rode on it?

Giraffe nods yes.

EDNA. Have you ever been in the circus?

Giraffe shakes head yes.

Dick. Do you know what 2 and 1 is?

Giraffe taps three times.

Ida. Now say good-by to everybody. (*Applause as he leaves.*) Those who have prepared stories for today can get your books out now.

Yes and no questions were difficult for the children to formulate, and as a consequence the interview with Highboy was not as successful as the one with Jumbo (For Jumbo's interview, see p. 149).

C. The ages of animals.

After the report on the whale was given this material was mimeographed and given to each child to help him answer the questions that were raised about the life span of the various animals.

No one knows exactly how long animals live in a wild state, but records have been kept of animals that have been tamed by men. And scientists are able to come very close to the ages of wild animals by looking at the teeth, bones and other parts of the body. Turtles, toads, crocodiles and many reptiles, all cold-blooded animals, have the longest life of land animals, some living up to three hundred years. The elephant is thought to live about one hundred years. Whales live five hundred years, and scientists think some may live to be a thousand years old. Domesticated or tame animals are short-lived. A dog is old at twelve, and dies at fifteen. A few have been known to live, but blind and feeble, until twenty. Cats live from thirteen to fifteen years. The wild cats, or lions, live to be forty. Horses and cows are old at twenty, and die before thirty. Of all birds the little singers are the shortest lived, living from three to fifteen years. This may be because of the many accidents that cut their lives short, for pet canaries have lived for twenty-five years. The crow, swan and eagle often live to be a hundred. With a few exceptions, the rule seems to be that the largest animals of all classes, those of which there are fewest in number, live the longest. The same rule seems to apply to plants. There were big trees in California, and whales in the ocean, that were hundreds of years old when Columbus discovered America.

D. Outline of a sample report period (near the end of the unit).

Selections read by four girls:

HEALTH A. B. C's, Metropolitan Life Insurance Co., San Francisco.

Selections read by one girl:

MOTHER EARTH'S CHILDREN, by Elizabeth Gordon, The P. F. Volland Company, Chicago, 1914.

Report given by two girls (illustrated with handmade slides):

Jumping Mouse.

News report by one boy (discussion followed):

Fire at San Francisco Wharf.

Weekly reader report by two boys (discussion followed):

Aviation.

Discussion started by one boy's question:

"Which is worse a dust storm or a flood?"

News read from city paper, by one girl, reporting the play "Zoocus."

Weekly reader report by one boy:

Summer safety (bicycles, skates and poison oak).

Report by one boy:

Rabbits.

Story read by two boys:

Caterpillar.

II. ENJOYING RIDDLES.

Samples of riddles originated by some of the children follow:

RIDDLE. It is an animal that lives in the water. It is very large. It is a mammal that has rough skin. It squirts water from a hole in its head. What is it?

ANSWER. A whale.

RIDDLE. It is a very large bird with a long neck. It lives in the desert on the edge of the jungle. It hides its head when it is afraid because it thinks it is all hidden then. What is it?

ANSWER. An ostrich.

RIDDLE. It is an animal that lives in the woods of Africa. It has solid leg bones and a very long neck. Its favorite food is the mimosa leaf. What is it?

ANSWER. Giraffe.

III. ENJOYING STORIES AND DRAMATIZATIONS.

Near the beginning of the unit the stories were sometimes not prepared so well as they should have been and the children who were presenting them to the class were told in polite, concise terms that more preparation was needed. Very quickly the standards were raised and soon there were no poorly prepared stories.

Several times the dramatizations or stories that the class liked best were presented for the members of the first-grade class who were interested in circuses.

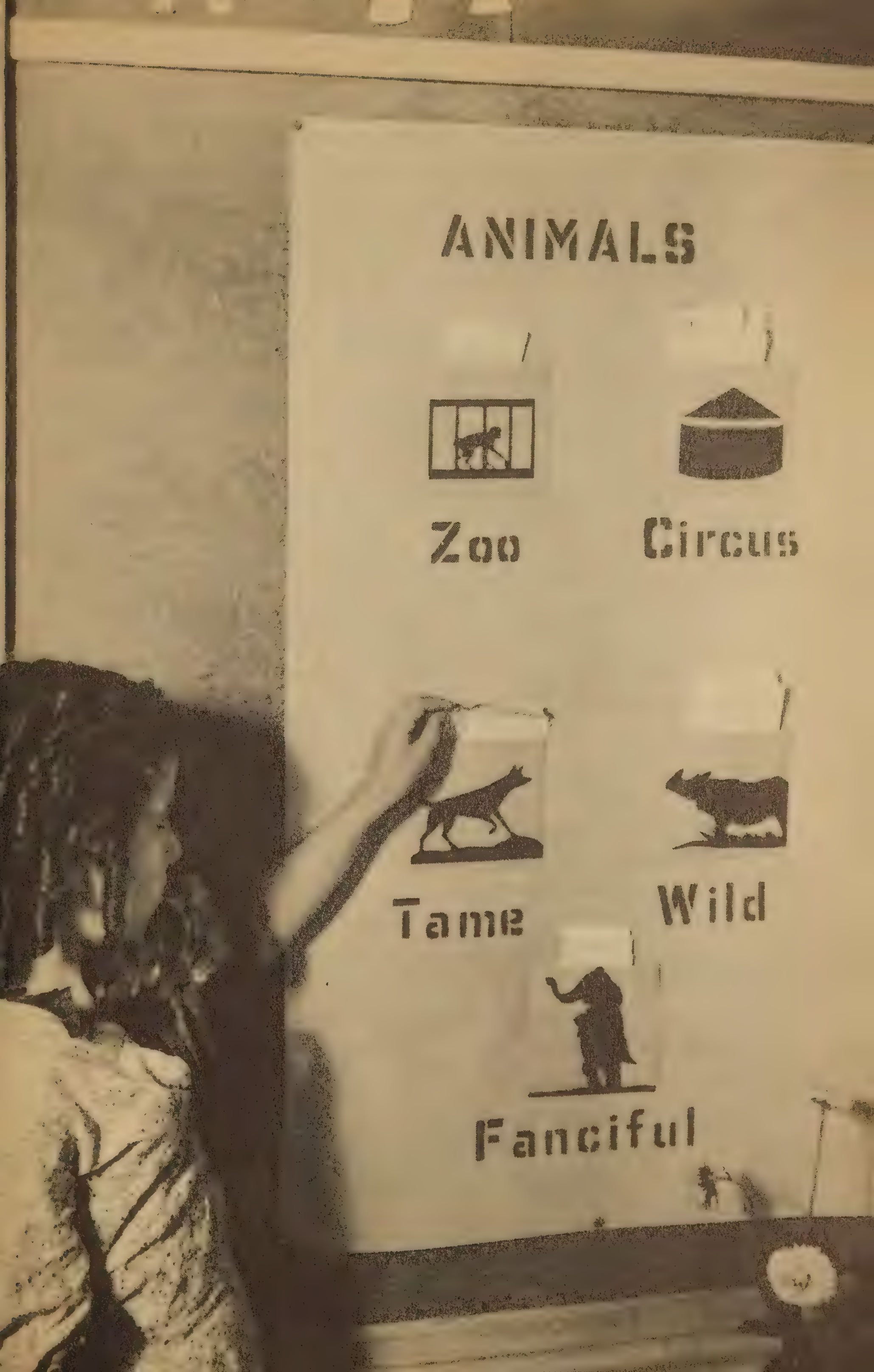
A Reading Period Shortly after the Reports and Discussions on the Elephant

1. Elephant at the zoo, factual, by two girls (illustrated with handmade slide):
   Reader, DO AND LEARN, II, American Book Company.
2. "Tillie's Birthday Party," by three girls and one boy (illustrated with a picture roll):
   Reader, FACT AND STORY, II, American Book Company.
3. "More about Tillie," by two boys:
   Reader, FACT AND STORY, II, American Book Company.
4. "The Elephant Who Wanted Two Trunks," read by two boys while it was dramatized by four other children:
   Reader, STUDY READERS, II, Charles E. Merrill Company.
5. "The Monkeys and the Doll's Hat," by three boys (illustrated with handmade slides):
   Reader, FACT AND STORY, II, American Book Company.

Stories Chosen and Read by the Children the Day after the Report on Bears

1. Rosy Cheek and Strongheart by four girls, "The Surprise" (continued from the health story the teacher started earlier in the morning):
   HEALTH READER, II, by Andress and Whitmore, The Macmillan Company, New York, 1926.
2. Road to Reading by one boy, "I Want A Bear" (poem):
   OUTDOORS AND IN, II, Rand, McNally & Company, San Francisco.
3. "The Black Bear" by two boys (factual material, illustrated with large colored pictures from the art department):

FIG. 45.—*This chart gives the teacher a definite check on quantity as well as quality of books read by all members of the class.*


ANIMALS
Zoo
Circus
Tame
Wild
Fanciful

EARLY JOURNEYS IN SCIENCE, II, J. B. Lippincott Company, Philadelphia.

4. MILLIONS OF CATS, selections by two boys:
   (Library Book.) Coward-McCann, Inc., New York.
5. "Why the Bear Sleeps All Winter," by one boy (illustrated with hand-made slides):
   WORK-PLAY BOOKS, I, The Macmillan Company, New York.
6. "The Pumpkin," "The Popcorn Children," "Miss Radish," "Mother Potato," etc., by two girls:
   MOTHER EARTH'S CHILDREN, by Elizabeth Gordon. The P. F. Volland Company, Chicago.

IV. Reading for pleasure.

Books from the city, college, and school libraries were on the bookshelves and tables, and the sets of Readers were continually being changed, so that in most cases the pleasure reading was one and the same with the reference reading.

V. Enjoying music.
   A. Songs.
   B. Rhythms.
   C. Appreciation records.

VI. Enjoying pictures in:
   a. Magazines.
   b. Books.
   c. Booklets from dime stores.
   d. Newspapers.
   e. Art collections.
   f. Snapshots.
   g. Photographs.

VII. Enjoying slides.

VIII. Enjoying stereoptican pictures.
   (Keystone set.)

IX. Enjoying book reports.

X. Enjoying stories read by the teacher.
   A. MONKEY DO, by Margaret Evans Price,
   Harper & Brothers, New York, 1934.

B. JUNGLE BABIES (parts read by a girl), by Edyth-Kargh-Eustace,
    Rand, McNally & Company, Chicago, 1932.
C. MOWGLI STORIES, by Rudyard Kipling,
    Junior Literary Guild, New York, 1936.
D. DR. DOOLITTLE'S CIRCUS, by Hugh Lofting,
    Frederick A. Stokes Company, New York, 1924.
E. DR. DOOLITTLE'S ZOO, by Hugh Lofting,
    Frederick A. Stokes Company, New York, 1925.
F. ZEKE THE RACCOON (about half read by one little girl who was a good reader), by Rhea Wells,
    Junior Literary Guild, New York, 1933.
G. MOTA AND THE MONKEY TREE, by Margaret Evans Price,
    Harper & Brothers, New York, 1935.
H. KAROO THE KANGAROO, by Kurt Wiese,
    Coward-McCann, Inc., New York, 1929.
I. KARI, THE ELEPHANT, by Dhan Gopal Mukerji,
    E. P. Dutton & Company, Inc., New York, 1922.

PROBLEM-SOLVING ENTERPRISES

I. Planning and preparing reports.

The reports needed a great deal of supervision at first both in preparing and presenting. As the unit progressed great improvement was shown in most of the reports, and they were prepared more independently.

II. Finding answers to questions arising in discussion periods.

Reference work for fact finding as well as for the reports showed great improvement as the unit progressed and less and less supervision was necessary.

III. Planning ways for earning money.

A. Entertainment.
    "Zoocus."
B. Home activities.
    1. Doing household duties.

    2. Gardening.
    3. Selling papers and magazines.
    4. Having lemonade stands.
    5. Selling junk.
  C. Paper drive.
    1. Telephoning for prices offered by different paper companies.
    2. Arranging for use of storeroom space.
    3. Arranging for use of scales.
    4. Appointing monitors.

IV. PLANNING EXCURSIONS.
  A. To the theater.
  B. To the city library.
  C. To the zoo.

V. PLANNING MAP, BORDER, QUILT, BOOKLETS, FURNITURE, PUZZLES, AND ERASER COVERINGS.

VI. PLANNING AND PREPARING STORIES AND DRAMATIZATIONS.

SPECIFIC LEARNING ENTERPRISES

I. LEARNING FACTS ABOUT ANIMALS.

Name	Hippopotamus Greek { hippo—horse potamus—river	Giraffe	Opossum
Habitat	Swampy places	Plains covered with thickets and bushes	Generally in wooded swampy country
Range	Africa	Africa	U. S. (particularly in southern states)
Description	5 or 6 tons, rough skin, short legs, very large mouth	Very tall and slender, very long neck, very long slender legs, brown spots	6 or 7 lb., grayish white with very white face
Disposition	Amiable, makes good pet	Shy and peaceable	Sluggish

● FIG. 46.—*Charles makes silhouettes of the animals for which he has "explored" and places them on the world map.*

AFRICA
ANTARCTIC OCEAN

Food	Tender roots, grass	Tender leaves and shoots	Animals or plants
Home	Tall swamp grass		Hollow tree
Young	Every 5 or 7 years, usually only one, which stays with mother 4 or 5 years	Usually only one, about 6 ft. tall when born	2 to 3 brood a year, of 5 to 15 babies ½ in. long. They stay with mother 2 months and are nursed in pouch
Calls	Honking, squeal	No vocal cords, thus no voice	
Enemies	Lion, crocodile, man	Lions, leopards, man	Most larger carnivorous animals
Protection	Swimming and diving	Eyes set to see in all directions. Sharp hoofs for kicking and solid legs with bones that give great force. Protectively colored	Hide or "play possum," pretending to be dead
Characteristics		Can go without water for 2 or 3 days	Piglike snout, prehensile naked tail, awkward movement. Night animal. Destroys rats, insects, chickens. Hibernates in cold weather

II. Learning many names and scientific terms.

There were many animals mentioned that numerous children had never heard of, so that the list of animals' names was a long one.

Following are just a few of the terms that the children learned to use in their discussions and conversations:

haunches
cold-blooded
fangs
muzzle
breed
family
mammals
pachyderms

III. Learning locations on maps.

IV. Learning to spell words for stories and reports.

Not only were the names of the animals used but also the words descriptive of their characteristics and habits.

These are a few of them:

pouches
jumping
huge
family
enemies
quills
importance
creature
common
stomach
eyes
scientific
cousins
different
teeth
explore
jungle
tiny
large

V. Learning how to make pictures.

- A. Drawing the animals.
  - 1. Materials.
    - a. Newspaper.
    - b. Crayons or chalk.
    - c. Illustrative pictures.
  - 2. Method.
    - a. General shapes and proportions of the different parts of the body were studied and discussed.
    - b. Circles, ovals and lines were drawn to get the proper proportions.
    - c. Colored and shaded.
    - d. Discussed.
- B. Drawing scenes.
  - 1. Materials.
    - a. Newspaper, drawing paper, rolls of paper, large sheets of butcher paper, or blackboard.
    - b. Crayons or chalk.
    - c. Illustrative pictures.
  - 2. Method.

Having had practice in making the animal by itself a study of its typical surrounding was necessary before the scenes could be completed.

VI. Learning how to look up references.

VII. Learning where to find materials for reports.

VIII. Learning behavior patterns in various situations.
  A. Consideration for the rights of others.
  B. Promptness.
  C. Neatness.
  D. Cooperation.
  E. Responsibility.
  F. Politeness.
  G. Fairness.
  H. Exactness (in stating facts).

IX. Learning to correct and overcome grammatical errors in oral and written reports.

When the discussion period was still new to the children there was not much criticism because it would probably have kept many from participating. As the unit advanced more and more criticisms and suggestions were offered and the class as a whole gradually improved.

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Teacher's bibliography

Key to annotation abbreviations
F.—good factual material
R.—good oral reading material
I.—good illustrations

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Children's Bibliography

A. Readers

(Organized according to reading levels of ability)

1. High-first-grade reading ability.

Book	*Pages*	*Animal*	*Publisher*	*Date*
BOBBS-MERRILL PRIMER	18–28	Goat	Bobbs-Merrill Company, Indianapolis	1923
	48–58	Tiger—Lion—Fox		
	62–80	Tigers		
	120–128	Goats		
CALIFORNIA STATE SERIES,	8–10	Dog	California State Series	1927
CHILD STORY READERS: "Terry and Billy"	17–21	Goat		1929
	41–46	Dog		
	93	Monkey		
	102–105	Dog—Goat		
	114–118	Lion—Dog—Monkey—Elephant		
CHILD'S OWN WAY SERIES, A PRIMER: "Wag and Puff"	1	Dog	Wheeler Publishing Co. Chicago	1927
	2–5	Dog		
CITIZENSHIP READERS PRIMER: "Home"	7	Dog	J. B. Lippincott Company, Philadelphia	1930
	13–20	Dog		
	34–35	Dog		
	77–78	Dog		
	80–95	Dog		
EVERYDAY CLASSICS PRIMER	1–24	Bears	The Macmillan Company, New York	1922
	84–94	Fox		
HAVING FUN—A PRIMER	5	Dog	Houghton Mifflin Company, Boston	1929
	54–59	Bear		
	88–94	Bear		
PETS AND PLAYMATES	9–11	Dog	John C. Winston Company, Philadelphia	1931
	21–25	Dog		
	73–80	Dog		
THE PROGRESSIVE ROAD TO READING: STORY STEPS	18–22	Bear	Silver, Burdett & Company, New York	1917
	63–71	Lion		
	84–96	Pony		

Book	*Pages*	*Animal*	*Publisher*	*Date*
THE SMEDLEY AND OLSEN NEW PRIMER	103–114	Pony	Hall and McCreary Company, Chicago	1926
	117–125	Bear—Fox		
THOUGHT TEST READERS PRIMER	83–85	Pony	University Pub. Co.	1926
	93–97	Bears		

2. High-first and low-second reading ability.

BOBBS-MERRILL FIRST READER	30–39	Bears	Bobbs-Merrill Company, Indianapolis	1934
	50–57	Pony		
BOLENIUS READERS, FIRST READER: “Animal Friends”	58–59	Dog	Houghton Mifflin Company, Boston	1930
	86–87	Lion—Fox		
	96–101	Bear—Fox		
	103–104	Lion		
	105–106	Monkey		
	106–113	Elephant—Lion—Fox		
CHILD-LIBRARY READERS PRIMER	14–24	Bear	Scott, Foresman & Company, Chicago	1923
CHILD’S OWN WAY SERIES, A FIRST READER	8–9	Dog	Wheeler Publishing Company, Chicago	1927
	10–13	Dog		
	48–53	Dog		
	80–81	Circus dog		
	82–86	Circus dog		
	88–89	Monkey		
	90–95	Monkey		
	96–97	Elephant		
	98–101	Elephant		
CURRICULUM READERS, FIRST READER “Friends in Town and Country”	9–17	Monkeys	Bobbs-Merrill Company, Indianapolis	1934
	18–27	Elephant—Lion—Monkey—Bear		
	28–40	Bear—Pony		
	56–59	Dog		
	60–70	Dog		
	140–144	Monkey		
	146–151	Pony		
DO AND LEARN READERS PRIMER “Boys and Girls at Work and Play”	8	Dog	American Book Company, New York	1930
	23–26	Dog		
	89	Dog		
	90	Dog		
	91–92	Dog		

Book	*Pages*	*Animal*	*Publisher*	*Date*
DO AND LEARN READERS PRIMER (Continued)	93–94	Dog	American Book Company, New York	1930
	95	Dog		
	98–100	Dog		
	105–108	Dog		
DUTCH TWINS PRIMER	70–83	Dog	Houghton Mifflin Company, Boston	1917
	84–99	Dog		
FIRST LESSONS IN LEARNING TO STUDY	23	Horse—Colt	Ginn & Company, Boston	1926
	25	Dog and Puppies		
	52	Dog		
	74–76	Dog—Horse		
	81–87	Goat		
F-U-N BOOK	89–95	Dog	The Macmillan Company, New York	1926
HAPPY CHILDREN READERS	9	Dog	Ginn & Company, Boston	1925
	10–13	Dog		
	84–87	Dog		
PATHWAY TO READING, FIRST READER	48–51	Dog	Silver, Burdett & Company, New York	1925
	83–88	Camel		
PLAYING TOGETHER	93–99	Bear	Ginn & Company, Boston	1934
	106–113	Monkey and Bear		
	116–122	Dog		
	122–126	Elephant—Lion—Bear		
	155–161	Bear		
	215–250	Monkey		
RAINBOW READERS, BOOK I	29–34	Monkey	Row, Peterson and Company, New York	1931
	71–75	Bear		
REAL LIFE READERS: "At Home"	1–4	Horses	Charles Scribner's Sons, New York	1930
	5–9	Horses		
STORY READER, BOOK I	12–13	Pony	Houghton Mifflin Company, Boston	1924
	13–18	Pony		
	92–101	Pony		
STUDY READERS, FIRST YEAR	13–14	Puppy	Charles E. Merrill Company, New York	1928
	34–35	Puppy		
	36–37	Puppy		
	41–50	Puppy		
	52	Puppy		
	53	Dog		
	74–75	Puppy		
	132–133	Pony		

Book	*Pages*	*Animal*	*Publisher*	*Date*
TOBY CHIPMUNK	49–54	Bear	American Book Company, New York	1931
	64–72	Bear		
TRUE STORY SERIES: "The Pet Pony" and Other Stories	8–16	Dog	Bobbs-Merrill Company, Indianapolis	1928
	34–45	Pony		
	68–73	Pony		
	86–90	Dog		
	120–132	Dog		
	144–151	Tiger—Lion—Dog—Horse—Elephant		
WEBSTER READERS. FIRST READER—EASY NEW STORIES	45–52	Dog	Webster Publishing Company, St. Louis	1932
	59	Tiger and Kittens		
	60	Lion and Babies		
	61	Horse and Colt		
	66	Elephant and Baby calf		
	68–70	Bear and cub		
	84–93	Dog and puppy		
	104–105	Pony		
	150–154	Dog		

3. Low-second reading ability.

CHILD-LIBRARY READERS, BOOK I	17–22	Bear	Scott, Foresman & Company, Chicago	1930
CHILD-STORY READERS. FIRST READER	32–34	Elephant	Lyons and Carnahan, Chicago	1927
	82–87	Elephant		
	89–92	Elephant		
	93–96	Elephant		
CITIZENSHIP READERS	16	Dog	J. B. Lippincott Company, Philadelphia	1930
DO AND LEARN READERS. FIRST READER	24–31	Dog	American Book Company, New York	1930
EASY ROAD TO READING. FIRST READER	8	Dog	Lyons and Carnahan, Chicago	1919
	15–20	Goats		
	73–84	Lion—Camel—Elephant		
	128–131	Elephant—Hare		

Book	*Pages*	*Animal*	*Publisher*	*Date*
ELSON BASIC READERS, BOOK I	7–12	Elephant	Scott, Foresman & Company, Chicago	1930
	49–53	Bear		
	54–59	Elephant		
	65–69	Dog		
	113–117	Bear		
	140–144	Goat		
ELSON READERS, BOOK I	40	Dog	Scott, Foresman & Company, Chicago	1927
	108–111	Horse—Colt		
	112–115	Camel		
	124–128	Goats		
EVERYDAY CLASSICS. FIRST READER	13–17	Goats	The Macmillan Company, New York	1924
FACT AND STORY READERS, BOOK I	16–17	Dog	American Book Company, New York	1930
	69–73	Dog		
	90	Horse		
	121	Elephant		
	122–127	Elephant		
	130–133	Pony		
	136–139	Lion		
	141–150	Bear—Goat		
GROWING UP, BOOK I	3–10	Dog—Duck	John C. Winston Company, Philadelphia	1931
HAPPY HOUR STORIES	26–30	Elephant	American Book Company, New York	1921
	42–50	Bear		
	79–84	Giraffe		
LINCOLN READERS, BOOK I	58–63	Pony	Laurel Book Company, New York	1926
NUMBER STORIES, BOOK I	7	Monkey	Scott, Foresman and Company, Chicago	1932
	8	Monkey		
	9	Monkey		
	10–15	Monkey		
	23–27	Monkey		
	36–39	Monkey		
	45–46	Monkey		
	48–52	Monkey		
	61–66	Bear		
	74–81	Bear		
	84–89	Bear		
	90–94	Bear		
	111–115	Monkey		
	120–123	Elephant		
	128–131	Dog		

Book	*Pages*	*Animal*	*Publisher*	*Date*
PENNELL AND CUSACK, BOOK I. Children's Own Readers	13–17	Dog	Ginn & Company, Boston	1929
	64–71	Bear		
	87–95	Horses—Elephant Lion—Bear		
	96–99	Lion—Elephant Pony—Dog—Bear		
	100	Bear		
	101	Horse—Monkey		
	102	Lion		
	103	Pony		
	104–105	Dog		
SKAGS, THE MILK HORSE	5–44	Horse	American Book Company, New York	1931
	55–110	Horse		
STORY FOLK. FIRST BOOK	59–61	Horse	World Book Company, Yonkers-on-Hudson, N. Y.	1927
	63–65	Dog—Horse		
	94–99	Bear		
	100–105	Bear		
STORY HOUR READERS, REVISED, BOOK I	16–19	Goat—Wolf	American Book Company, New York	1931
	43–53	Dog		
	93–101	Bear		
THOUGHT TEST READERS. FIRST GRADE	30	Lion	University Publishing Company, New York	1925
	55	Dog		
	61	Dog		
	71	Zebra		
	73	Horse		
TREE BOYS	11	Tiger—Lion	Laidlaw Brothers, New York	1929
	14–15	Tiger		
	16–17	Tiger—Apes		
	18–19	Lion		
	22–24	Tiger		
	25–26	Apes		
	31–34	Bears—Apes—Monkeys		
	40–42	Rhinoceros—Tiger		
	46–50	Bear		
	59–61	Rhinoceros		
	69–74	Apes		

Book	*Pages*	*Animal*	*Publisher*	*Date*
TREE BOYS (Continued)	78–80	Zebra	Laidlaw Brothers, New York	1929
	84–90	Tiger		
	113–117	Mammoth		
TRUE STORY SERIES. "Fifty Flags"	176–180	Elephants	Bobbs-Merrill Company, Indianapolis	1928
	182–196	Dog—Elephant Camel—Bear		
UNDER THE STORY TREE	23–31	Bear	The Macmillan Company, New York	1927
	127–134	Dog		
WORK-PLAY BOOKS. FIRST READER	11–14	Bear	The Macmillan Company, New York	1930
	15–31	Bear		
	32	Polar Bear		
	41–59	Elephant—Dog—Monkey—Bear		
	101–102	Dog		
	103–115	Dog		
	117–126	Puppy		
	147–161	Monkey		

4. Low-second and high-second reading ability.

Book	*Pages*	*Animal*	*Publisher*	*Date*
CALIFORNIA STATE SERIES: CHILD-STORY READERS, MAGIC STORIES	15–16	Bear	California State Series	1929
	50	Dog		
	71–75	Bear—Horse		
	99–103	Dog		
	136–138	Dog		
	149–153	Elephant		
	180–182	Dog		
CITIZENSHIP READERS, II. "School Days"	6	Dog	J. B. Lippincott Company, Philadelphia	1930
	13–15	Dog		
	15–17	Dog		
	18	Dog		
	28–38	Dog		
DRAMATIC READER, BOOK I	10–13	Monkey	Houghton Mifflin Company, Boston	1928
	55–59	Dog		
	55–59	Dog		
GOOD TIMES WITH BEVERLY	20–26	Dog	Ginn & Company, Boston	1933
	38–42	Horse		
	60–63	Bear		
	74–83	Baby lion		
	84–89	Bear		

Book	*Pages*	*Animal*	*Publisher*	*Date*
GOOD TIMES WITH BEVERLY (Continued)	91–98	Monkey—Elephant	Ginn & Company, Boston	1933
	144–150	Horse		
HAPPY CHILDREN READERS, BOOK II	22–24	Lion—Bear Elephant	Ginn & Company, Boston	1925
	38–40	Lion		
	41–45	Bear		
	46–49	Elephant		
	50–55	Pony		
	56–60	Elephant—Bear Pony—Lion		
	61–66	Lion—Bear Elephant		
	82–88	Camel—Horse Elephant		
	89–92	Bear—Elephant		
	93–99	Horse—Bear Elephant		
LEARN TO STUDY READERS, BOOK I	16–25	Dog	Ginn & Company, Boston	1924
	133–150	Bear		
MUNCHING PETER AND OTHER STORIES	55–58	Bear—Lion Kangaroo	Ginn & Company, Boston	1934
	59–74	Tiger—Kangaroo Bear—Giraffe		
	100–101	Monkey		
	101–116	Elephant		
	121–125	Horse		
	221–235	Puppy		
	266–269	Pony		
MY CUT-A-PICTURE BOOK	1–3	Lion	Silver, Burdett & Company, New York	1926
	18–20	Dog		
	31–32	Bear—Dog		
	53–57	Bear		
	70–74	Pony		
	75–80	Bear		
NEW PATH TO READING	29–34	Colt	Ginn & Company, Boston	1929
	48–52	Tiger—Bear Monkey—Lion		
	53–60	Elephant		

Book	*Pages*	*Animal*	*Publisher*	*Date*
NEW PATH TO READING (Continued)	99–104	Bear and cubs	Ginn & Company, Boston	1929
	114–117	Kangaroo and baby		
	119–124	Hippopotamus and baby		
	173–182	Donkey—Dog		
	183–189	Horse		
	202–204	Dog		
	206–212	Bear		
PROGRESSIVE ROAD TO READING, BOOK II	5–12	Camel—Jackal	Silver, Burdett & Company, New York	1909–1920
	42–47	Lion—Jackal		
	92–103	Dog—Donkey		
SMEDLEY AND OLSEN, NEW FIRST READER	15–16	Puppy	Hall and McCreary Company, Chicago	1925–1928
	17–19	Puppy		
	39–41	Dog—Puppy—Kitten		
	84–85	Dog		
	86	Dog		
	87	Dog		
	88	Donkey		
	89	Donkey		
WEBSTER READER, SECOND READER	1–8	Bear	Webster Publishing Company, St. Louis	1932
	12–13	Dog		
	14	Dog		
	17–20	Dog		
	95–100	Dog		
	146–148	Horse		
	162–164	Monkey		
	194	Dog		
	214	Bear		
WORK-A-DAY DOINGS	13–20	Bear	Silver, Burdett & Company, New York	1914
	21–26	Monkey		
	27–31	Horse		
	41–48	Bear		
	66–75	Dog		
WORK-A-DAY DOINGS: "On the Farm"	5–8	Bear	Silver, Burdett & Company, New York	1916
	4–13	Bear		
	14–16	Bear		
	17–23	Bear		
	24–28	Bear		
	29–31	Bear		

Book	*Pages*	*Animal*	*Publisher*	*Date*
WORK-A-DAY DOINGS (Continued)	32–35	Bear—Dog	Silver, Burdett & Company, New York	1916
	36–39	Bear—Dog—Horse		
	40–43	Bear		
	44–51	Bear—Dog		
	52–58	Bear		
	59–64	Bear		
	65–71	Bear—Horse		
	72–78	Bear		
	79–83	Bear		
	84–90	Bear		
	91–95	Bear		
	96–101	Bear		
	102–106	Bear—Horse		
	107–111	Bear		
	112–122	Bear—Horse—Dog		
	123–128	Bear—Horse—Dog		
WORK-PLAY BOOKS. SECOND READER	4–5	Puppy	The Macmillan Company, New York	1930
	6–9	Puppy		
	10–12	Puppy		
	13–16	Puppy		
	17	Puppy		
	59–62	Puppy		
	69–71	Bear		
	71–74	Bear		
	75–77	Bear		
	188	Dog		
	189–193	Bear		
	194–197	Bear		
	198–199	Bear		

5. Low-third reading ability.

BOBBS-MERRILL SECOND READER	34–43	Tiger	Bobbs-Merrill Company, Indianapolis	1924
	46–50	Camel		
	67–68	Lion		
	69	Camel		
	154–157	Bear		
BOLENIUS READERS. SECOND READER: "Happy Days"	6–7	Dog	Houghton Mifflin Company, Boston	1930
	66–73	Bear		

Book	*Pages*	*Animal*	*Publisher*	*Date*
CHILD-LIBRARY READERS, BOOK II	138–151	Horse	Scott, Foresman & Company, Chicago	1928
	179–191	Dog		
DO AND LEARN READERS. SECOND READER	51	Monkey	American Book Company, New York	1930
	52	Elephant		
	53	Lion		
	54	Camel		
	55	Bear		
	56	Hippopotamus		
	83–106	Horse		
	158–164	Monkey		
	165–175	Lion-Bear		
	245–260	Horse		
DO AND LEARN READERS. THIRD READER	17–24	Dog—Monkey	American Book Company, New York	1930
	34	Monkey		
	36–39	Elephant		
	40–42	Camel		
	43–44	Lion		
	45–47	Bear		
	48–49	Hippopotamus		
EASY ROAD TO READING. SECOND READER	60–62	Camel	Lyons and Carnahan, Chicago	1920
	78–89	Pony		
	189–196	Dog		
ELSON BASIC READERS, BOOK II	7–11	Dog	Scott, Foresman & Company, Chicago	1931
	35–39	Bear		
	41–45	Pony		
	61–65	Bear		
	66–73	Pony		
	98–101	Camel		
	194–198	Dog		
ELSON READER, BOOK II	57–59	Elephant—Monkey	Scott, Foresman & Company, Chicago	1928
	60–62	Bear		
	87–92	Horse		
	158–162	Dog		
FACT AND STORY READERS, BOOK II	7–15	Elephant	American Book Company, New York	1930
	48–52	Monkey		
	56	Bear—Cub		
	61–64	Elephant		
	99–103	Dog		
	120–126	Dog		
	127–130	Pony—Dog		
	132–133	Dog		
	135–136	Pony		

Book	*Pages*	*Animal*	*Publisher*	*Date*
FIELD ADVANCED SECOND READER	12–15	Dog—Monkey	Ginn & Company, Boston	1934
	84–95	Tiger—Horse		
	109–114	Monkey		
FLEETFOOT, THE CAVE BOY	58–61	Bear	Laidlaw Brothers, New York	1929
	82–86	Rhinoceros		
	87–93	Rhinoceros—Lion		
	129–131	Bear		
GOOD READING SECOND READER	66–75	Tiger	Charles Scribner's Sons, New York	1926
LINCOLN READERS, BOOK II	147–149	Monkey	Laurel Book Company, New York	1926
	173–176	Dog		
	182–187	Elephant		
NEW BARNES READERS, BOOK II	102–103	Monkey	Laidlaw Brothers, New York	1917
	125–136	Monkey		
	148–149	Dog		
NEW FRIENDS, BOOK II	1–7	Dog	John C. Winston Company, Philadelphia	1931
	26–29	Bear		
	64–75	Monkey—Lion —Tiger		
	89–93	Elephant		
	103–110	Elephant		
PARMLY SECOND READER	22–33	Dog—Horse	American Book Company, New York	1914
	47–59	Dog—Horse		
	91–101	Dog—Donkey		
	105–115	Lion		
PATHWAY TO READING. SECOND READER	141–145	Bear	Silver, Burdett & Company, New York	1925
	162–163	Horse		
PENNELL AND CUSACK, BOOK II	9–12	Dog	Ginn & Company, Boston	1929
	14	Dog		
	15	Dog		
	16	Dog		
	17	Dog		
	18	Dog		
	59–72	Tiger		
	119–122	Lion		
PETER AND POLLY IN SUMMER	35–37	Dog	American Book Company, New York	1912
	59–65	Horse		
	70–73	Dog		
	126–130	Monkey		
PETER AND POLLY IN WINTER	106–110	Horse	American Book Company, New York	1914

Book	*Pages*	*Animal*	*Publisher*	*Date*
STONE'S SILENT READING, BOOK II	197–204	Monkey	Houghton Mifflin Company, Boston	1925
STORY-FUN, SECOND BOOK	61–68	Horse	World Book Company, Yonkers-on-Hudson, N. Y.	1927
	75–83	Dog		
	84–90	Dog		
	91–101	Dog		
	120–125	Dog		
	126–130	Dog		
STORY HOUR READERS, Revised, BOOK II	11–14	Monkey	American Book Company, New York	1923
	29–38	Bear		
	83–92	Bear		
	93–97	Horse		
	193–202	Pony—Monkey—Elephant		
STORY READER, BOOK II	31–35	Horse	Houghton Mifflin Company, Boston	1924
	44–48	Dog		
	100–115	Bear		
	159–166	Lion		
SILENT READERS	21–28	Bear	John C. Winston Company, Philadelphia	1924
	43–45	Elephant		
	47–54	Elephant		
	61–66	Bear		
	127–132	Dog		
	174–176	Horse		
STORIES TO ACT	26–27	Lion—Bear—Elephant	Rand, McNally & Company, Chicago	1915
STUDY READERS, SECOND YEAR	98–99	Camel	Charles E. Merrill Company, New York	1928
	100–103	Camel		
	105–108	Giraffe		
	111–113	Monkey		
	115–121	Elephant		
	162–171	Elephant		
	177–189	Puppy		
THOUGHT TEST READERS, SECOND GRADE	63–64	Lion	The University Publishing Company, New York	1928
TRUE STORY SERIES: "The Sailing Tub"	24–33	Dog	Bobbs-Merrill Company, Indianapolis	1928
	36–45	Dog		
	90–97	Horse		
	146–159	Tiger—Elephant		
		Monkey—Lion		

Book	*Pages*	*Animal*	*Publisher*	*Date*
WINSTON COMPANION READERS	23–24	Horse	John C. Winston Company, Philadelphia	1923
	44–47	Lion		
	53–54	Monkey		
WINSTON READERS. SECOND READER	23–24	Lion	John C. Winston Company, Philadelphia	1918
	25–27	Dog		
	32–35	Bear		
	83–84	Lion		
	85–91	Monkey		
	94–100	Dog		

6. Low-third and high-third reading ability.

CURRICULUM READERS. THIRD READER	11–15	Elephant Dog—Bear—Camel	Bobbs-Merrill Company, Indianapolis	1934
	16–25	Horse		
	27–40	Bear		
	175–176	Dog		
	219–230	Dog		
	234–243	Dog—Monkey		
DO AND LEARN READERS	7–16	Dog	American Book Company, New York	1930
	17	Dog		
	18–20	Dog		
	21–22	Dog		
	23–24	Dog		
	26–27	Dog		
	28–30	Dog		
	31–32	Dog		
	33–35	Dog		
	37–39	Dog		
	40–42	Dog		
	112–119	Dog		
DRAMATIC READER, BOOK II	4–6	Horse	Houghton Mifflin Company, Boston	1928
	13–18	Elephant		
	49–53	Camel		
ELSON BASIC READERS, BOOK III	19–28	Elephant	Scott, Foresman & Company, Chicago	1931
	55–62	Bear		
	251–257	Bear		
	318–327	Dog		
GREAT IDEA AND OTHER STORIES	24–37	Dog	Ginn & Company, Boston	1934
	60–63	Dog		
	186–194	Bear		
	220–228	Horse		
	251–255	Dog		

Book	*Pages*	*Animal*	*Publisher*	*Date*
IN FABLELAND	5–10	Lion	Silver, Burdett & Company, New York	1911
	21–23	Dog		
	24–29	Lion		
	39–45	Lion		
	50–52	Dog		
	53–58	Monkey		
	98–102	Dog		
	103–113	Lion—Bear		
	114–119	Lion		
	139–142	Lion		
	153–156	Monkey		
	160–166	Lion		
LEARN TO STUDY READERS, BOOK II	25	Dog	Ginn & Company, Boston	1924
	28–29	Dog		
	30–32	Dog		
	35	Dog		
	36–37	Dog		
	40–41	Dog		
	42–44	Dog		
LITTLE INDIANS	129–139	Bear	The Macmillan Company, New York	1930
	142–147	Dog		
MUSIC APPRECIATION READERS, BOOK II	46–50	Pony	University Publishing Company, New York	1926
	80–81	Dog		
NEW PATH TO READING	61–65	Elephant	Ginn & Company, Boston	1929
	66–79	Elephant		
	90–94	Hippopotamus—Elephant		
NIXIE BUNNY IN FAR-AWAY LANDS	125–129	Elephant—Hippopotamus—Rhinoceros	Beckley-Cardy Company, Chicago	1917
	131–135	Camel		
SILENT READERS. THIRD READER	62–68	Dog	John C. Winston Company, Philadelphia	1923
	130–138	Dog		
	139–146	Dog—Horse		
	180–187	Dog		
	196–203	Tiger—Camel		
	231–237	Horse		
WEBSTER READERS. THIRD READER	12–16	Bear	Webster Publishing Company, St. Louis	1932
	26–34	Dog		
	83–87	Elephant		

Book	*Pages*	*Animal*	*Publisher*	*Date*
WEBSTER READERS (Continued)	180–184	Camel	Webster Publishing Company, St. Louis	1932
	185–190	Horse		
WORK-PLAY BOOKS	3–7	Bear	The Macmillan Company, New York	1931
	8–11	Bear		
	12–15	Bear		
	16–18	Bear		
	23–30	Bear		
	31–34	Bear		
	197–200	Dog		
	201–207	Dog		
	208–215	Dog		

7. High-third and low-fourth reading ability.

ANIMAL FOLK TALES	108–123	Bear	American Book Company, N. Y.	1916
	124–128	Bear—Dog		
	129–132	Bear		
	151–162	Ape		
	163–167	Ape		
	201–205	Lion		
	206–209	Lion		
	210–215	Lion		
	216–219	Camel		
	234–238	Elephant		
	239–246	Elephant—Tiger		
	247–265	Dog—Horse—Bear		
BOLENIUS THIRD READER	163–165	Bear	Houghton Mifflin Company, Boston	1923
	166–171	Bear		
CHILD-LIBRARY READERS, BOOK III	35–38	Bear	Scott, Foresman & Company, Chicago	1925
	88–101	Dog		
	131–139	Dog		
	149–152	Bear		
	155–158	Dog		
CUBBY BEARS IN CALIFORNIA	1–12	Bear	Rand, McNally & Company, Chicago	1928
	13–20	Bear		
	21–28	Bear		
	29–37	Bear		
	38–50	Bear		
	51–60	Bear		
	61–72	Bear		

Book	*Pages*	*Animal*	*Publisher*	*Date*
CUBBY BEARS IN CALIFORNIA (Continued)	73–79	Bear	Rand, McNally & Company, Chicago	1928
	80–90	Bear		
	91–98	Bear		
	99–104	Bear		
	105–112	Bear		
	113–119	Bear		
	120–127	Bear		
	128–136	Bear		
	137–144	Bear		
	145–151	Bear		
	152–157	Bear		
	158–167	Bear		
	168–176	Bear		
EASY ROAD TO READING. THIRD READER	232	Lion	Lyons and Carnahan, Chicago	1919
	240–248	Elephant		
	248–251	Elephant		
ELEPHANT FRIEND AND OTHER STORIES	7–18	Elephant	Ginn & Company, Boston	1934
	49–57	Horse		
	86–92	Dog		
	118–129	Dog		
	154–163	Dog		
ELSON READERS, BOOK III	13–14	Horse	Scott, Foresman & Company, Chicago	1927
	15–16	Dog—Horse		
	178–186	Dog		
EVERYDAY CLASSICS. THIRD READER	27	Lion	The Macmillan Company, New York	1923
	41–42	Lion		
	145–153	Dog—Donkey		
FACT AND STORY READER, BOOK III	26–32	Bear	American Book Company, New York	1930
	39–46	Monkey		
	89–95	Bear		
	140–145	Lion		
	146–147	Elephant		
	239–240	Dog		
	241–242	Dog		
	243–246	Dog		
GOOD READING. THIRD READER	73–80	Dog	Charles Scribner's Sons, New York	1926
	81–82	Dog		
	83	Dog		
	83–84	Dog		
	183–184	Dog		
LEARN TO STUDY READERS	106–109	Elephant	Ginn & Company, Boston	1925
	110–114	Elephant		

Book	*Page*	*Animal*	*Publisher*	*Date*
LEARN TO STUDY READERS (Continued)	116–118	Elephant	Ginn & Company, Boston	1925
	121–125	Elephant		
	127–129	Elephant		
	130–133	Elephant		
	135–138	Elephant		
	246–253	Horse		
LINCOLN READERS. THIRD READER	53–54	Monkey	Laurel Book Company, New York	1922
MODERN SCHOOL READERS, BOOK III	17	Monkey	Harr Wagner Publishing Co., San Francisco	1924
NEW BARNES READERS, BOOK III	15–22	Tiger	Laidlaw Brothers, New York	1930
OREGON CHIEF	1	Horse	Ginn & Company, Boston	1927
	18–19	Dog		
	21–22	Dog		
	29	Horse		
	31–32	Horse		
	37–38	Horse		
	39	Horse		
	41–42	Horse		
	79	Horse		
	82	Bronco		
	112–113	Horse		
	127–154	Horse		
PATHWAY TO READING. THIRD READER	4–7	Dog	Silver, Burdett & Company, New York	1925
	12–20	Lion		
	119–125	Bear		
	133–137	Dog		
PENNELL AND CUSACK, BOOK III	19–32	Dog	Ginn & Company, Boston	1929
	36–40	Bear		
	41–44	Lion		
	45–51	Dog		
	52–60	Lion		
	69–73	Horse		
	142–148	Dog		
	149–151	Bear		
	152–156	Dog		
	197–202	Monkey		
	203–211	Camel		
	226–234	Dog		

Book	*Page*	*Animal*	*Publisher*	*Date*
STONE'S SILENT READING, BOOK III	52–54	Bear	Houghton Mifflin Company, Boston	1925
STORY FRIEND, THIRD BOOK	38–47	Horse	World Book Company, Yonkers-on-Hudson, N. Y.	1927
	40–57	Bear		
	115–116	Dog		
	184–191	Bear		
	203–206	Lion		
STORY HOUR READERS, BOOK III	159–165	Camel	American Book Company, New York	1914
TAMING THE ANIMALS	28–32	Horse	Laidlaw Brothers, New York,	1930
	33–38	Dog		
	57–61	Dog		
	148–158	Bear		
	194–199	Bear		
THOUGHT-STUDY READERS, BOOK IV	174–175	Bear	Lyons and Carnahan, Chicago	1929
THOUGHT-TEST READERS. THIRD READER	1–2	Dog	University Publishing Company, NewYork	1926
	21–23	Camel		
	24–27	Bear		
	64–67	Horse		
	105–108	Dog		
	109–111	Dog		
	112–114	Dog		
	115–116	Dog		
	117–119	Dog		
	120–121	Dog		
	159–161	Bear		
TRUE STORY SERIES: "Dinty the Porcupine"	21–25	Bear	Bobbs-Merrill Company, Indianapolis	1928
	91–108	Dog		
	110–116	Dog		
	118–126	Dog		
WONDER WORLD, BOOK III	1–7	Elephant	John C. Winston Company, Philadelphia	1930
	26–30	Kangaroo		
	73–75	Hippopotamus		
	86–89	Puppy		
	120–123	Dog		
	127–133	Puppy		
	150–156	Horse		
	187–195	Dog		
	196–203	Dog		

B. Animal Books from the Public Library in San Jose.

1. Nonfiction.

(* Signifies that either the book was read to the children or the children reported on it.)

Berridge, W. S. ZOO ANIMALS. A. & C. Black, London, 1932.

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Butler, Eva L. ALONG THE SHORE. John Day Company, Inc., New York, 1930.

Chaffee, Allen. BROWNIE THE ENGINEER OF BEAVER ROCK. Milton Bradley Company, Springfield, Mass., 1927.

Cory, Harper. ANIMALS ALL. Country Life, Ltd., London, 1932.

De Sola, Ralph, and Fredrica De Sola. STRANGE ANIMALS AND THEIR WAYS. Charles Scribner's Sons, New York, 1933.

*Ditmars, Raymond L., and Helene Carter. THE BOOK OF PREHISTORIC ANIMALS. J. B. Lippincott Company, Philadelphia, 1935.

Eipper, Paul. ANIMALS LOOKING AT YOU. Viking Press, Inc., New York, 1929.

Gall, A. C., and F. H. Crew. RINGTAIL. Oxford University Press, New York, 1933.

Gatti, Attilio. THE KING OF THE GORILLAS. Doubleday, Doran & Company, Inc., Garden City, N. Y., 1932.

Kellogg, Vernon. INSECT STORIES. D. Appleton-Century Company, Inc., New York, 1923.

Morton, J. B. WHO'S WHO IN THE ZOO. Houghton Mifflin Company, Boston, 1933.

Mukerji, Dhan Gopal. GAYNECK. E. P. Dutton & Company, Inc., New York, 1927.

*Mukerji, Dhan Gopal. KARI THE ELEPHANT.

*Robinson, W. W., and Irene Robinson. ANCIENT ANIMALS. The Macmillan Company, New York, 1934.

Robinson, W. W. ANIMALS IN THE SUN. Harper & Brothers, New York, 1934.

Robinson, W. W. ELEPHANTS. Harper & Brothers, New York, 1935.

2. Fiction.

Bailey, Arthur Scott. THE TALE OF NIMBLE DEER. Grosset & Dunlap, New York, 1923.

Bailey, Arthur Scott. THE TALE OF PETER MINK Grosset & Dunlap, New York, 1916.

Bealy, John Y. SUNSHINE ROSE. Thomas Rockwell Co., Chicago, 1931.

Bennett, Richard. SNOOKUM AND SANDY. Doubleday, Doran & Company, Inc., Garden City, N. Y., 1935.

Brown, Paul. PIEPER'S PONY. Charles Scribner's Sons, New York, 1935.

*Davis, Mary Gould. SANDY'S KINGDOM. Harcourt, Brace & Company, Inc., New York, 1935.

Faulkner, Georgene. THE WHITE ELEPHANT, The P. F. Volland Company, Chicago, 1929.

Held, John, Jr. DOG STORIES. Vanguard Press Inc., New York, 1930.

Kelley, Raymond. O-GO THE BEAVER. Albert Whitman, Chicago, 1934.

*Kipling, Rudyard. JUNGLE BOOK. The Century Company, New York, 1903.

*Kipling, Rudyard. JUST-SO STORIES. Doubleday, Doran & Company, New York, 1906.

LaRue, Mabel G. ZIP THE TOY MULE. The Macmillan Company, New York, 1932.

*Lofting, Hugh. DR. DOOLITTLE'S CIRCUS. Frederick A. Stokes Company, New York, 1924.

*Lofting, Hugh. THE STORY OF DOCTOR DOOLITTLE. Frederick A. Stokes Company, New York, 1920.

Perkins, Charles Elliot. THE PINTO HORSE. Wallace Hebberd, Santa Barbara, Calif., 1927.

Price, Margaret Evans. MONKEY-DO. Harper & Brothers, New York, 1934.

*Price, Margaret Evans. MOTA AND THE MONKEY TREE. Harper & Brothers, New York, 1935.

*Sperry, Armstrong. ONE DAY WITH JAMBI IN SUMATRA. John C. Winston Company, Philadelphia, 1934.

St. Clair, Mabelle Halleck. MAX, THE STORY OF A LITTLE BLACK BEAR. Harcourt, Brace & Company, Inc., New York, 1931.

Stong, Phil. HONK THE MOOSE. Dodd, Mead & Company, New York, 1935.

*Thomas, Dorothy Gay. HUMPTY HOBBLE—THE ADVENTUROUS PENGUIN. Macrae-Smith Company, Philadelphia, 1932.

*Wiese, Kurt. KAROO THE KANGAROO. Coward-McCann, Inc., New York, 1929.

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C. Animal Books in the School Department Library.

AESOPS FABLES. A. L. Burt Company, Inc., New York.

Akers, Dwight. THE KING'S MULE. Junior Literary Guild, New York, 1933.

Bullard, Marion. MR. M'TAVISH (dog). E. P. Dutton & Company, Inc., New York, 1933.

Chaffee. CHINOOK THE CINNAMON CUB. Milton Bradley Company, Springfield, Mass., 1929.

Ditmars, Raymond L. THE BOOK OF PREHISTORIC ANIMALS. Junior Literary Guild, New York, 1935.

Gag, Wanda. MILLIONS OF CATS. Coward-McCann, Inc., New York, 1928.

Hader, Mrs. Berta (Hoerner). MIDGET AND BRIDGET. The Macmillan Company, New York, 1934.

Hader, Mrs. Berta (Hoerner). PICTURE BOOK OF TRAVEL. The Macmillan Company, New York, 1928.

Hader, Mrs. Berta (Hoerner). SPUNKY (pony). The Macmillan Company, New York, 1933.

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Long, Wm. J. WAYS OF WOOD FOLK. Ginn & Company, Boston, 1902.

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Linderman, F. P. STUMPY (Squirrel). Junior Literary Guild, New York, 1933.

Persing, Ellis. ELEMENTARY SCIENCE BY GRADES, BOOKS I TO IV. D. Appleton-Century Company, Inc., New York, 1929.

Petersham Maude, and Miska Petersham, STORY BOOK OF FOOD. STORY BOOK OF TRANSPORTATION, John C. Winston Company, Philadelphia, 1933.

Robinson, W. W. ANCIENT ANIMALS. The Macmillan Company, New York, 1934.

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Das Tier (Translation). THE SECOND PICTURE BOOK OF ANIMALS. The Macmillan Company, New York, 1933.

Seton, E. T. WILD ANIMALS I HAVE KNOWN. Grosset & Dunlap, New York, 1898.

Sloane, Anna B. ANIMAL PETS FROM NEAR AND FAR. Beckley-Cardy Co., Chicago, 1927.

Sperry, Armstrong. ONE DAY WITH MANU. Junior Literary Guild, 1933.

Talbot, Ethel. THE BOOK OF BABY ANIMALS. T. Nelson & Sons, Ltd.; T. C. & E. C. Jack, Ltd., 1928.

Wells, Rhea. ALI THE CAMEL. Junior Literary Guild, 1931.

Wells, Rhea. BEPPO THE DONKEY. Doubleday, Doran & Company, Inc., 1934.

D. Unit Study Books.

American Educational Press, New York, 1935.

These little paper-bound books were found invaluable from a reference standpoint. The material was easily read and interestingly written.

The first digit in each number indicates the grade placement of the reading material; *e.g.* No. 154 is for Grade 1, No. 403 is for Grade 4.

No. 154. Animal Families.
No. 253. Life in the Sea.
No. 351. The Story of Frogs.
No. 355. What Animals Eat.
No. 403. Hot Dry Lands.
No. 608. Fisheries.

E. Magazines.

NATIONAL GEOGRAPHIC
NATURE MAGAZINE

Music Bibliography

Armitage. FOLK AND ART SONGS, Book II. C. C. Birchard & Company.
"The Caravan," page 125.
"The Contented Camel," page 127.

Bentley. BENTLEY PLAY SONGS. A. S. Barnes & Company.

"The Bear," page 12.
"The Kangaroo," page 10.

Bentley. THE SONG PRIMER. A. S. Barnes & Company.
"The Bear," page 20, also page 39.

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"The Giraffe," page 23.

Calendar. CYCLE ROTE SONGS. White-Smith Music Company, New York, page 30.

Congdon, C. H. CONGDON MUSIC READER. C. H. Congdon, Educational Publications & Equipment, New York.
"Nonsense," Book II, page 43.

Foreman. A CHILD'S BOOK OF SONGS. American Book Company, New York.
"Hippopotamus and I," page 26.

Garttan. SINGING AS WE GO. Hinds, Hayden & Eldridge, Inc. New York.
"Elephant's Trunk," page 18.

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"The Suave Crocodile," Book III, page 135.
"The Elephant's Trunk," Book I, page 32.

Gaynor, Mrs. Jessie Lovel (Smith). SONGS OF THE CHILD WORLD. Theodore Presser Company, New York.
"The Elephant" Book III, page 25.

Giddings, Earhart, Baldwin. ELEMENTARY MUSIC, Music Educational Series. Ginn & Company, Boston.
"Monkey," page 57.

Giddings, Earhart, Baldwin. INTRODUCTORY MUSIC, Music Educational Series. Ginn & Company, Boston.
"The Elephant," page 140.

Giddings, Earhart, Baldwin. JUVENILE MUSIC, Music Educational Series. Ginn & Company, Boston.
"The Hunter," page 60.

Malone. ANOTHER KATHLEEN MALONE BOOK. G. Schirmer. E. C. Schirmer Music Company, Boston.
"Bear Song," page 20.
"The Elephant," page 22.

McConathy, Miessner, Birge, Bray. THE MUSIC HOUR. Silver, Burdett & Company.
"The Desert," Book III, page 12.
"The Elephant," Book I, page 72.
"The Candy Lion," Book II, page 14.

MUSIC HOUR FOR KINDERGARTEN AND FIRST GRADES. Silver, Burdett & Company.
"The Bear," page 29.
"The Elephant," page 28.

Neidlinger. SMALL SONGS FOR SMALL SINGERS. G. Schirmer. E. C. Schirmer Music Company, Boston
"The Man on the Dromedary," page 25.
Smith. ELEANOR SMITH SERIES. American Book Company.
"The Elephant," Book II, page 105.
"Elephant and Monkey," Book II, page 64.
Smith. SONG DEVICES AND JINGLES. Lothrop, Lee & Shepherd Company.
"Kangaroo," page 33.
Sheet Music.
"When the Circus Comes to Town."
"Rockin' in de Win'."

F. Animal Slides

Catalogued according to countries.

Key to Sources of Material:
P.P.S. Publishers' Photographic Service.
A.M.N.H. American Museum of Natural History.

Africa-Egypt

Gnu	P.P.S.
Dromedary	P.P.S.
Lions	P.P.S.
Baby hyena	P.P.S.
Hippopotamus	P.P.S.

China

Horse caravan	
Pack camels	A.M.N.H.

Czechoslovakia

Dog cart	Brunn, Cez. Slov. Publ. Ser.

Eskimo

Seals	P.P.S.
Polar bear	P.P.S.
Dog teams	A.M.N.H.
Dog and penguin	A.M.N.H.
Whale	P.P.S.
Penguins	P.P.S.
Moose	P.P.S.
Walrus herd	P.P.S.
Pack dogs	P.P.S.
Arctic hare	A.M.N.H.
Arctic fox	A.M.N.H.

Germany-Norway

Switzerland—St. Bernard dogs.................. P.P.S.

India

Oxen...................................... P.P.S.
Leopard
Cobra
Elephant.................................. P.P.S.

Mexico

Armadillo.

Primitive Man.

Mammoth, Columbia......................... A.M.N.H.
Mammoth, Northern......................... A.M.N.H.
Mammoth, Imperial......................... A.M.N.H.
Saber-tooth .... A.M.N.H.

South America

Conder.................................... P.P.S.
Llama..................................... A.M.N.H.
Oxen...................................... P.P.S.

Transportation.

Pony riders.

United States of America.

Weasel.................................... A.M.N.H.

Keystone Slides

Keystone View Company, Meadville, Pa.

71. Polar bear just out of his bath.
72. Buffalo herd.
73. Beavers.
74. Fox.
75. Mountain lion or puma.
76. Bengal tiger, colored.
77. Lions caged.
78. Hippopotamus.
79. Rhinocerous.
80. Kangaroos.
81. Crocodiles.
89. Ostriches.

92. Ground hog.
93. Elephants bathing in tropical streams, colored.
94. Reindeer herd.
96. American elk, colored.
98. Baby Monkey with mother in treetop, colored.
101. Black bears, colored.
107. Flamingos, colored.
112. Elephant carrying teakwood.
121. Elephant carrying log, colored.
122. Camel, mother and baby in desert.
123. Shetland pony with week-old foal.
196. Buffalo hitched to wagon of Mohammedan farmer.
197. Ox teams, colored.
198. Camel caravan, colored.
199. Eskimo dog team.
200. Reindeer and sleds.
201. Indian ponies and riders in costume, colored.

G. Art Pictures

Bonheur, Rosa. "The Horse Fair."
Bonheur, Rosa. "A Noble Charger" (horse).
Bonheur, Rosa. "The Lions at Home."
Landseer, Edwin. "The Aristocrat" (dog).
Landseer, Edwin. "Dignity and Impudence" (dog).
Landseer, Edwin. "A Distinguished Member of the Humane Society" (dog).
Landseer, Edwin. "Saved" (dog and child).
Landseer, Edwin. "The Monarch of the Glen" (deer).

7 · Community of San Jose*

SECTION I. NARRATIVE ACCOUNT

LAUNCHING THE UNIT

TEACHER. I wonder how many of you remember the story of the little pig who asked his mother what his eyes were for?

(*Children remembered.*)

Do you also remember what Ted's father said to him in the book of "GOLD AND SILVER"?

He told him while they were traveling and looking at the various points of interest that later he would talk with Ted about the things that he saw. Ted had looked puzzled. His father then told him that so many people *look* but never really *see*. They really do not *think* or ask questions about what they have seen. I would like to see today if you have learned what Ted did. Let us take a book, pencil, and paper, and take a walk for several blocks. Do not say a word but write down some of the things that you look at.

The children took the following route. They went by part of the residential district, the Civic Center, commercial district and several light industrial sections.

On returning the following discussion took place:

TEACHER. Shall we write a list on the board of the things you looked at? Just how many different things did you see?

HELEN. The Auditorium.

ROSALIE. The Music School.

NORMAN. St. Claire Hotel.

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* A unit developed by Mabel S. Willson with high-fourth-grade children.

SARAH. The City Hall.

TEACHER. Did anyone notice anything at the City Hall in particular?

SARAH. Down at the bottom they keep those who are in jail.

RAMONA. Houses.

LAWRENCE. Banks.

JACK. Books.

FRANK. Signs.

CONSTANCE. I saw the park.

RALPH. Oil stations.

HELEN. Shoe shops.

DOROTHY. Churches.

FRED. Stores.

DANIEL. School.

PAUL. Mail boxes.

JACK. Papers.

JERRY. Post office.

RICHARD. California Theater.

GERTRUDE. Flowers.

BETTY. Flags.

BARBARA. Trees.

GLLENDAWON. Undertakers.

LULA MAE. Fountain.

BETTY. Bakery.

ROBERT M. Telephone office.

ANTOINETTE. Fire hydrants.

HENRY. People.

ELMO. Garbage cans.

LAWRENCE. Bridges.

FRANK. Fire.

DOROTHY. Grain company.

BETTY LOU. Policeman.

RALPH. Cars.

EDWARD S. Fire-alarm box.

AMELIA. Coffee Shop.

SARAH. California Paste Company.

PAUL. Birds.

BETTY. Streets.

DOROTHY. Laundry.

RALPH. Tractors.

NORMAN. Apartments.

ROBERT. Chamber of Commerce.

PAUL. Lots.

RALPH. Barbershop.

ROSALIE. Windmill.

JACK. Water.

BARBARA. Hospital.

FRANK. Men working.

PETER. Parking spaces.

RALPH. Garage.

LAWRENCE. Playground.

RONALD. Office.

BARBARA. Cats.

BETTY. Telephone post.

Teacher. Now those are the things you looked at. But let us remember what Ted's father told him. Do you know what you really saw? Have you any questions about these things?

Lawrence. I saw cars and buildings.

Teacher. Yes, you looked at all of those things but what did you really see?

Elden. The community of San Jose.

Teacher. That's exactly right. You saw the community of San Jose. What does that word community mean?

Charles. It means the things that are in San Jose.

Teacher. Yes, what is a community then?

Jerry. It's a city.

Teacher. Is a community always a city?

Ronald. No.

Teacher. Well, all of these things make up a city. How many know exactly what a community is? Do you think that would be a good thing to find out?

Lulu Mae. Yes.

Teacher. Now let us look again at this long list we placed on the board. If all these things make up a city, what do you think a city really is, then?

Ralph. Houses.

Teacher. What are houses? Did they just grow up there all of a sudden?

Peter. No.

Teacher. What is the first thing we have to have?

Richard. Communication. Men came together and they started to build.

Teacher. We have other types of communication here in our city, but Ralph said we had to have houses. Did they just put houses any place?

John. No, they had to have blocks.

Teacher. What did they do before that?

Lawrence. They had to measure it.

TEACHER. What do we call it when we start?

PETER. You have to have plans.

TEACHER. Yes, the first thing we had to do was to make plans. All right, now if we look around, what were some of the other things that were necessary for a community or city?

FRED. They had to have transportation.

TEACHER. Why did they have to have transportation?

FRED. They had to have transportation so they could get their lumber to build the houses.

TEACHER. What kinds of transportation did they have?

CHILDREN. Trucks.
Trains.
Horses.
Busses.
Cars.
Airplanes.
Bicycles.
Streetcars.

TEACHER. What else do you need?

PAUL. Communication.

TEACHER. Yes, what are the things we have to communicate with in San Jose?

SARAH. Telephone Company.

TEACHER. What else do we have?

FRANK. Radio.

PETER. Telegraph.

TEACHER. Is there any other thing we use for communication? I think we saw something on our way this morning.

NORMAN. Mail.

TEACHER. Yes, we saw the old post office and mail boxes. Someone saw one more thing that is used for communication.

FRED. Newspapers.

Teacher. So far we know our city had to have plans, transportation and communication. What are some of the other things the city needed?

Barbara. It needed water.

Teacher. Yes, that is very important. What place in San Jose provides us with our water?

John. San Jose Water Company.

Teacher. All right. What else does our city need?

Paul. Food.

Teacher. Of course. That's very important. Now we don't know exactly how our city gets food so we will have to find out about it. What else is there?

Ramona. Stores.

Teacher. We passed something else that was very important, that every city needs.

Elden. Hospital.

Teacher. What does the hospital take care of?

Richard. Our bodies.

Teacher. Yes. What is that word we use every morning?

Children. Our health.

Teacher. Do we have someone to take care of the health of the city? You passed the emergency hospital today; what other place did we pass?

Peter. The City Hall.

Teacher. The City Hall takes care of the health of the city. The City Health Inspector is there.

Ronald. The garbage man also helps us.

Teacher. That's included under health.

Elden. The undertaker.

Teacher. Yes.

Child. Policemen.

TEACHER. What do we have policemen for?

CHILD. To direct traffic and to take care of us.

TEACHER. That is right.

EDWARD. To protect us.

TEACHER. Yes. So we have to have someone to protect the community. Under protection we have our health and we have our police. Do we have anything else besides these?

RICHARD. We have the firemen.

TEACHER. Yes. Is there anything else that we looked at today?

JOHN. We need schools.

TEACHER. That's very important. We have various types of schools, too. Is there anything else we need?

JERRY. Factories.

TEACHER. What is included under factories? You have to work to live in the communities. What could we put down to mean all of the work. Your fathers do different things. What shall we call all of them?

LAWRENCE. Industries.

TEACHER. Yes, the different industries in San Jose. Now is there anything else? Besides people working, what else do they do?

SARAH. Entertainment.

TEACHER. Can you think of a better word than entertainment? What words on the board would come under that heading?

DOROTHY. Auditorium.

LAWRENCE. Theaters.

RALPH. Playgrounds.

TEACHER. Now all those things come under one big word. It begins with an R. Recreation. How many have heard of that big word? So it takes all of those things to build up our city or our community. We saw most of them on our trip this morning.

RELATED ENGLISH AFTER DISCUSSION

TEACHER. As you look at these words on the board, do they bring to you any other thoughts?

RAMONA. They are picture words.

TEACHER. Yes, each word brings a definite picture to your mind. I wonder if we could improve these pictures. Suppose you were a stranger just visiting San Jose. What would you see?

WORD PICTURES OF SAN JOSE

Barbershop for a haircut.
Policeman blowing a whistle.
Birds were singing.
Men were working.
People walking on the sidewalk.
Flowers in the gardens.
Cars in the street.
Windmills turning around.

Elden Carley

Signs with pictures on them.

Lula Mae Vaughn

Men working in a lot.
Taxicabs riding in the street.
Flags waving in the breeze.

Elmo Ferrari

People were going into houses.
People were watering flowers.

Barbara Batchelder

Cars driving on the streets.
Men working outdoors.
People working in the houses.
Policeman stopping the cars.
Some people were going to the bank.
Men at a shoe shop.
People going to church.
A flag on the porch.
Children going to school.

Paul Munson

Many people going into the hotels.
Mail men put letters into the mail boxes.
Many people have to ring the fire alarms at different times.
I saw many children playing in the playground.
Sarah Mazzarese

The back of the California Theatre near the St. Claire Hotel.
People going in the City Hall.
I saw a policeman standing on the corner watching traffic.
Dorothy Roberts

RELATED READING

"Many of you were puzzled when Elden told you that you saw the community of San Jose. You were not exactly certain what a community is. Let us read and find out."

Each child had a copy of COMMUNITIES OF MEN.* They were intensely interested in their findings. A lively discussion followed. The children asked questions and showed a desire to learn more about their community. It was impossible to find reading material to help them that was on their level. Finally, the problem was solved by the suggestion of excursions to these places that made up a city. Everyone was delighted with the idea.

The following note was sent home to each parent:

> We are going on a series of excursions around San Jose. We will either go by automobile or on foot. Your child will be under good supervision, and the utmost care taken of him. Kindly sign below if you are willing that your child should go. ______________________
>
> Parent's Signature

During the Citizenship Club rules of conduct on an excursion were discussed. Specific things were listed and placed on the board:

1. We would stay with our partner.
2. We would keep in order and walk quietly on the streets.
3. We would talk quietly.
4. We would watch our traffic boys and the lights while crossing the streets.

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* Rugg, Harold, and Louise Krueger, COMMUNITIES OF MEN, Ginn & Company, Boston, 1936.

5. We would listen carefully and take notes at the places we visited.

BUILDING A COMMUNITY

During the discussion on communities, the children found that their schoolroom was a community. They decided it would be an interesting idea to pattern their small community after the City of San Jose. They elected a City Manager, Councilmen, Police Judge, and a Health Inspector. To make it more realistic, the children planned the development of their city on the schoolroom floor. It was necessary to gather accurate maps and to make plans for this development.

READING WHICH LED TO AN EXCURSION ON VIEWING THE CITY FROM THE AIR

At this time they were given a chapter to read in COMMUNITIES OF MEN on "How Our City Looks from the Air." The children decided they would like to see their city from the air. An excursion was planned to go to the top of the Bank of America Building.* The teacher made arrangements with the building manager to conduct the children on the tour.

A council meeting was held the next morning and the following discussion took place.

Dorothy. Will the council meeting please come to order! How many know what is on the table?

Sarah. There's a globe on the table and a map of California.

Peter. There's a relief map of the United States.

Teacher. What does a map do?

Dorothy. A map shows us where our different countries are and how to get there.

Teacher. Yes, now we have all these different kinds of maps on the table. There is still one kind of map that you haven't mentioned yet.

Fred. A road map.

Teacher. Yes. Do all the maps show us the same thing?

Lawrence. No, a relief map shows the mountains.

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* Fourteen stories to the observation tower.

Teacher. How does it show the mountains?

Milton. Parts of it are raised.

Teacher. Does a relief map only show mountains?

Richard. No, it shows where the people live and how to get there.

Elden. It shows how to get to San Francisco.

John. Did you know that a globe is a map?

Ralph. There are many kinds of maps.

Teacher. We have all these maps on the table. How did we first start getting these maps? Why have we all these different kinds? Which maps are better than the others?

Ramona. A globe is a better map than a flat one because it is more accurate.

Teacher. A flat map is useful but not always accurate.

Lawrence. A map in the book showed South America and then it showed Greenland. Greenland looked just the same as South America.

Teacher. Why did Greenland look just the same as South America? Do you remember what the experiment was in your book?

Dorothy. If you take orange peels and try to press them down on paper they would break.

Teacher. Yes, if you peeled an orange in large pieces and then tried to press it down you would have to stretch the surface. Now this is a relief map. What do all these maps do?

Sarah. They show us different cities and towns.

Teacher. How do you think these people made these maps?

Ramona. By going up in an airplane and taking a picture of the different places.

Teacher. Yes, that's a very good way. Is there any other way?

Elden. They use instruments.

Teacher. How do they do that, Elden?

Elden. I don't know, I just heard about it somewhere.

TEACHER. How did the children in the book make a map of their schoolroom? Did they just sit down and draw it?

RALPH. They measured it.

TEACHER. Then what is necessary when you are making a map?

PETER. A ruler.

TEACHER. Would they measure just how long a room was and just how wide?

FRANK. Yes.

TEACHER. If you were making a map of the city how would you measure the streets and blocks?

FRED. You would have a long tape.

TEACHER. What do they call these people who measure the streets?

RICHARD. Surveyors.

TEACHER. Yes, so these maps are accurately measured. We couldn't go up in an airplane to see our city. What did we do?

RONALD. We went on top of a high building.

TEACHER. I wonder if someone could tell us about our trip.

JOHN. We went to the top of the Bank of America and saw all the different streets.

JACK. Some brought their cameras and took pictures.

PETER. We went up to the fourteenth floor in the elevator.

HELEN. We looked over and saw the Hotel DeAnza and the Victory Theatre. It showed how some places were built. Some were built in a triangle.

SARAH. We saw Woodrow Wilson School and the Civic Auditorium.

LAWRENCE. I saw the hangar of the Macon.

TEACHER. Could you see outside of the city of San Jose?

DOROTHY. Yes, we saw the bay from the top of the building.

TEACHER. If you had a large telescope you could probably see much farther. Well, what else can you tell about our trip? Did anyone make any maps of any kind?

Lawrence. Yes, when we reached the fourteenth floor you gave us a piece of paper and we started to draw the streets. We made the streets on the map and then put on what side of the street different houses and things were.

Teacher. What part of the town did you draw, Paul?

Paul. Market Street.

Teacher. Did anyone else draw any maps?

Fred. I drew the auditorium and the City Hall and one of the churches that was there.

Sarah. I drew a map of Santa Clara Street.

Teacher. We are going to be able to use these pictures and information in many ways. Let us again look at the maps on the table, and see if we can find out more about them.

Ramona. When the Indians traveled across the western part of the United States at night what did they use for maps?

Peter. They used the stars for maps.

Ralph. How many different kinds of maps are there, then?

Frank. There are flat maps, globes—

John. Outline maps.

Teacher. What kind of a map is an outline map? Has anyone seen an outline map?

Elden. Does it show just the outline of the different places?

Teacher. Yes, that's exactly it.

Peter. Can a telescope see things that you cannot see?

Ramona. By looking through a telescope you see things that can't be seen without it.

Teacher. Are there any other questions or ideas about these things that we saw?

Ralph. How many years ago were the Indian maps found?

Elden. About 600 years ago.

RALPH. No, it wasn't 600 years ago.

FRED. Was it 150 years ago?

RALPH. No.

DOROTHY. Was it 400 years ago?

RALPH. Yes, it was 400 years ago.

TEACHER. Do you know how many years it has been since people started making maps?

SARAH. The Greeks used to just draw pictures.

TEACHER. Yes, but before that. It was about 4,000 years ago. How do you think they first started to make maps?

ELDEN. They just drew pictures of the different places.

TEACHER. Why was it important that they have maps?

BETTY LOU. Well, when they were coming across the desert they had to know how to go.

TEACHER. Yes, someone would draw a picture for them in the sand.

NORMAN. Have they maps for the people on the ocean?

TEACHER. Do they call them maps?

BETTY. No.

TEACHER. What do they call them? Does anyone know? They call them charts. How could they make a map or a chart of the ocean?

DANIEL. They had to use a compass.

TEACHER. Yes. They find out what course they're taking so they must have North, East, South and West.

ROSALIE. They put in different islands that they pass.

TEACHER. That's right. What else do they have?

FRED. They have lighthouses.

TEACHER. Where do they have the lighthouses?

HELEN. They put them by rocks.

BARBARA. They put little bells on the shore.

TEACHER. What do they call those bells?

EDWARD. Foghorns.

TEACHER. No. Did you ever hear of a buoy? Is that all they put on the charts?

AMELIA. They put the land.

TEACHER. Do they put the entire outline of the land on their maps as we do on our flat maps?

GERTUDE. They put the shore line on the charts.

TEACHER. Do we have any other kinds of maps besides these?

JERRY. They have a certain kind of airplane map that shows the places the planes pass over.

TEACHER. We have charts of the oceans and we have maps of the different countries. Is there anything else on the earth one might make a map of?

BETTY. We have sea maps.

TEACHER. Well, that's the ocean.

LULU MAE. They have lake maps and maps of rivers and streams.

TEACHER. Yes. In fact people have made maps of everything in the world, so you see how important map making is. The other day someone suggested that we make a map of San Jose so we took a trip to the top of the Bank of America. Monday we are going to the City Planning Commission and see how our maps are made.

RELATED ENGLISH—WRITING A CONTINUOUS STORY

The children, having decided to take excursions to get accurate information of their city, thought that it would be a good plan to record this information. Previously they had written diaries, log books and record books showing the progress of a unit. Gathering this information would be so different that several people suggested a continuous story be written about San Jose. The children finally came to the conclusion if it were done well enough the material might be used by the third grades of the city for their related reading.

FIG. 47.—*Daniel sketches his home as the first step in reproducing it on the floor map at school.*

AN EXCURSION TO GATHER MATERIAL IN ORDER THAT THEY MIGHT PLAN THEIR PART OF THE CITY

Permission was granted by the City Manager to allow the children to visit the City Planning Commission. Every type of map dating back to 1850 was on display. There were many aerial photographs also in evidence. The children listened attentively and took notes. They learned not only the plans of the city but also more about the city manager form of government. On returning from the excursion, our "city manager" called a meeting.

During the meeting many interesting facts were brought forth and evaluated.

One child started the discussion by giving the information that there were seven members in the City Council. The children added that the people also elected the Police Judge and the City Auditor. The City Council appointed the City Manager, Civil Service Commission and the City Clerks. The City Manager then appointed the Fire Chief, Health Officer, City Engineer, Superintendent of Schools, City Treasurer and the City Park Commissioner.

The work of the City Planning Commission was then discussed. The following facts were listed:

I. The city is zoned:
    A. One-family houses.
    B. Two-family houses.
    C. Apartments.
    D. Commercial districts.
    E. Light industrial districts.
    F. Heavy industrial districts.

II. The population of San Jose is 65,400.

III. Many pictures are taken from airplanes and blimps. These are made into pictorial maps.

IV. The City Planning Commission provides parks and playgrounds for the people.

FIG. 48.—*Appraising the sketch. The house will be built as nearly like the original as possible.*

OUR HOUSES

V. San Jose was definitely planned. In 1850 it was rectangular in shape. Other parts have been added so that it no longer is a rectangle.

VI. The City Planning Commission is keeping in mind the possible growth of the city. They know where new streets will be built, and other changes that will be made.

VII. They helped to plan where the new depot would be. They helped to build seven subways and one viaduct.
The information that they gathered and the maps that they obtained helped them in planning the part of San Jose that they were going to build.

CONSTRUCTING THE MAP

The members of our City Planning Commission were now ready for work. They took a small map of San Jose and with a pencil placed a cross where each child lived. They also marked the excursions that they would take showing how the city acquired its food, water, protection, education, communication and transportation. They drew lines around the section that they would build. It was in the form of a T. The floor was measured to see how much room it would take. The top part of the T was 3 yards and 14 inches long and 2½ yards wide. The bottom portion was 2½ yards long and 1 yard and 15 inches wide. Large sheets of wrapping paper were cut and pasted to fill this space. Molding was nailed around the edges to hold the paper firmly. The City Planning Commission counted the number of streets that had to fill each section, and by division decided just how wide the blocks and streets would be. They used chalk and rulers to measure the streets. After the streets were laid out a discussion arose as to what materials might be used to construct them. Sand was suggested and voted upon. Green sand was used for the residential section. Its color was obtained by adding calcimine to wet white sand and then allowing it to dry. They used paste and glue on the paper and sprinkled a layer of sand upon it. Blue sand was used for creeks. White sand was added to the streets and brown for the business district.

The city then turned into a beehive of architects. Each child drew a plan of his own house. Most of them sat in front of their houses and sketched them. The plans were brought in and placed together on the board. They had been collecting cardboard boxes of every shape, small pieces of wood, flour and salt. From this assortment of discard material small houses took shape. They tried to follow the plans of their own homes as closely as possible. Flour and salt were used to stucco some of the houses. They painted the wooden houses with calcimine and used colored paper on the cardboard boxes. Adhesive paper joined the sections of the homes together.

Every day the city grew as houses were finished and placed on the map.

EXCURSIONS TO FIND OUT HOW THE CITY GETS ITS FOOD

The class was divided into six groups; the Progressive Education Class of the State Teachers College had consented to take some of the groups to various places. They obtained permission from a retail store, dairy, wholesale meat market, wholesale fruit and vegetable market, hotel, and a wholesale grocery supply house. The groups started out at the same time. Some went on foot, and others by machine. When the groups returned to the classroom, they planned how they would give their reports to the others. Many interesting ideas were planned, and the following morning they were ready for their presentations.

The first group gave a report on the retail store. They had made letters which spelled the word R-E-T-A-I-L. They made a map showing the route they had taken, and a picture of the store.

Information given:

1. Retail stores depend upon the wholesale stores.
2. Retail stores couldn't afford to buy in such large quantities.
3. Retail stores couldn't pay so much insurance.
4. In some stores you buy from clerks, and in others you help yourself.
5. Large stores have many departments including delicatessen, butcher shop, fruits and vegetables, bakery and canned goods.

The second group gave a dramatization of their trip to the creamery. One child acted as the guide who answered the questions that the children asked.

Facts given:

1. Ice is made at the creamery.
2. The bottles and cans are sterilized.
3. It takes 5½ minutes to mix the ice cream.

4. The boiler is covered with asbestos to retain the heat and keep it cool on the outside.
5. The ice box is kept at a temperature of 10° below zero to freeze the ice cream.
6. Some of the milk is pasteurized.
7. It is harder to fill the bottles with cream because it is thicker.

The third group gave a dramatization of a hotel visit. The owner of the hotel invited his guests to take a tour of inspection. He showed them the following:

1. Rooms.
2. Sun-bath room.
3. Soft-water baths and showers.
4. Electric dishwashers.
5. Dining rooms.
6. Laundry room.

The next three reports told about the wholesale stores.

TEACHER. The first three reports told us more or less about how our families get their food, and how the people in a hotel live. As we went into our retail store yesterday we saw all these different departments. We saw the meat department, the delicatessen department, the vegetable department. Now the next three reports will tell us how our families get their fruit and vegetables.

(*Several children came in front of the room. They held bananas in their hands.*)

CHILD. Here is a picture of a wholesale store. Here are some boxes of oranges.

CHILD. The bananas came from Central America. When they ripen them they hang them downward. The bananas come to Blase Brothers a thousand bunches a week. They ripen these bananas at 70 degrees with gas.

CHILD. Retail merchants get their food from wholesale markets. Some of the fruit comes from the tropics.

CHILD. When we went to Blase Brothers, we saw tomatoes and corn and other vegetables.

CHILD. They are kept in the cold-storage room so they will not rot so soon. We also saw carrots from San Jose.

CHILD. In the cold-storage room there are some things that will rot if they are not kept cold. The temperature is from 40° to 36°.

CHILD. It takes three weeks for the bananas to ripen. They keep them in cold-storage rooms so they will not rot.

TEACHER. The next group will tell us how we get our meat.

CHILD. Good morning, how would you like to take a trip to a butcher's market?

CHILD. I am a butcher.

CHILD. I am the buyer.

CHILD. I am the teacher.

CHILD. We are the class.

BUTCHER. First I will show you the ice box where all our meat is stored.

CLASS. How do you get the meat in here?

BUTCHER. The meat is brought here from our slaughterhouses.

CHILD. Look at that big piece of meat.

BUTCHER. Yes, that is a big piece of meat.

CHILD. How did they cut it?

BUTCHER. They slice the meat down the middle then they cut it into four pieces.

CHILD. Could you tell us about how much that meat would weigh?

BUTCHER. About 150 pounds. A stamp is put on each cut of meat.

CHILD. Why is a stamp put on the meat?

BUTCHER. The stamp is a government guaranty that the meat has been inspected and is fit to eat.

CHILD. How long does the meat stay in here?

BUTCHER. It is better to keep it here for a short time than to eat it at once.

CHILD. What piece of meat is that?

BUTCHER. That is a Spring Lamb, the most expensive piece on the market. Here is a scale we weigh meat on. By putting a piece of meat on it you can find the exact price per pound.

Child. What piece of meat is that?

Butcher. That is a heart from a cow. I should say it weighs about 6½ pounds.

Child. Look how much bigger it is than our heart.

Teacher. I think we had better be going now.

Butcher. You must come again sometime.

Children. Thank you so much for letting us see your wholesale butcher shop.

Teacher. We have found out how the stores get their meat—now how do the retail stores get their canned goods and other things?

Child. We are having a play about a wholesale grocery store.

Betty Lou. I think I will call Mr. Renzel and get a case of milk. Hello, is this Mr. Renzel? I would like a case of milk.

Mr. Renzel. Are you a grocery-store owner?

Betty Lou. No, I am a housewife.

Mr. Renzel. We do not sell to people unless they own a grocery store.

Betty Lou. That is very interesting. I would like to come and visit your store.

Mr. Renzel. You may come this afternoon.

Betty Lou. All right, good-by.

Paul. It seems to me that my restaurant is getting out of coffee. Hello. Is this Mr. Renzel? I am a restaurant owner. Could you send me three or four cases of coffee? I would like to visit your store.

Mr. Renzel. Yes, I'll do that, and I will be glad to have you.

Paul. All right, good-by.

Richard. Hello, is this Mr. Renzel? I am the retail grocery-store owner. I would like to have a case of tomato sauce.

Mr. Renzel. All right, I will send it right over.

Richard. I would like to visit your store.

Mr. Renzel. I will be glad to have you.

(*Here they are at Mr. Renzel's wholesale grocery store.*)

Mr. Renzel. Well, what do you think of my place?

Betty Lou. I had no idea it was this big.

Paul. Mr. Renzel, why is a wholesale grocery store so important?

Mr. Renzel. Because if we did not have a wholesale grocery store you would have to send back to Alaska or Hawaii or other places to get groceries.

Betty Lou. My, how interesting! Why, look at all the dog and cat food up there. Are there so many dogs and cats in San Jose that you have so many cans of food?

Mr. Renzel. No, people eat it too.

Richard. Why I never thought people ate dog food.

All. Thank you, Mr. Renzel, for taking us through your store. It was very interesting.

Teacher. I am sure that we have a better idea of what a retail and a wholesale store is. I liked that one question that was asked "why is a wholesale store so important?"

Dorothy. If there weren't any wholesale stores the retail stores couldn't get any food.

Teacher. Why don't they get their food where the wholesale people do? (*No response.*) Well, has a corner grocery a large space like the wholesale grocery does?

Helen. No.

Teacher. How do they get these things—in large or small quantities?

Lawrence. The wholesalers get all their things by the carloads. A retail grocer doesn't have the room.

Teacher. The corner groceries aren't big enough. Do they have to insure these things against fire or theft?

Lula Mae. Yes.

Teacher. Could they afford to do that?

Fred. No.

Teacher. Those are two good reasons why they have wholesale stores. I wonder if anyone knows any stories about how these wholesalers get their groceries. Could you tell how they get their eggs?

Sarah. Mr. Smith is a County Collecting Agent. He sells the eggs to Mr. Jones, who sells them to a company. This company sends to New York to a businessman, Mr. Brown. Mr. Brown sells them to a wholesaler and he sells them to the retailer.

Teacher. In the small communities one can generally get them quite easily. I wonder what these large cities have to depend upon.

John. If the airplanes or trains or trucks weren't running they would starve to death.

Teacher. Why?

Rosalie. Because they have to depend upon these trains to bring the food to town.

Teacher. In a small community like ours, would we have any trouble? How many of your mothers go out to the truck gardens or to the farms? In a large city like New York where our cousins are coming from they depend upon all of these things coming in from the outside.

Norman. Eight million people live in New York. What would happen if the trains and boats would stop?

Lawrence. The people in New York would starve to death.

Helen. They would be forced to leave New York.

Jack. In the olden times they had a hard time to get their food. They had to use horses and buggies. Now they use machinery.

Jerry. Markets are always interesting places to visit. All night long while the rest of the city is sleeping, truck loads of goods are being arranged for the next day's sale.

Teacher. I think that we will be able to add an excellent chapter to our book on, "How Our City Gets Its Food." We also can build wholesale and retail stores for our city.

A FRIEZE FOR THE ROOM

After returning from their first excursion a frieze was suggested depicting the progress of their trips taken and contemplated.

Fig. 49.—*The class is welcomed at the City Hall by the chief of police.*

Each child sketched the building visited. The best one was chosen for the frieze. All the children made paper cutouts of themselves, and placed them in front of the buildings visited. Signs were made and placed under each section of the frieze.

ADDITIONAL EXCURSIONS SHOWING THE NEEDS OF A CITY AND THE RESULTANT INFORMATION GAINED BY THE CHILDREN

I. An excursion to find out "How Our City Gets Its Water."

A. Information gathered:

1. One half our water comes from wells and one half from the mountains.
2. There are 20 distributing reservoirs.
3. There are four large reservoirs: The Upper and Lower Howell, Williams and Lake Ranch.
4. The largest reservoir is above Wrights Station.
5. The water is brought into San Jose through large flumes.
6. The Water Company does not allow fishing, hunting or camping on the 7,000 acres that they own. The people might contaminate the water.
7. Water is pumped out of the wells, into a tank and then into large pipes.
8. The Water Company does not sterilize the water in the wells.
9. They put chlorine into the reservoirs if it is needed.
10. The City Health Office tests the water every day.
11. A man from Stanford University tests the water once a week.
12. The pipes that carry the water into our homes are called service pipes.
13. The water costs 23½ cents per 100 cubic feet.
14. You must have your water turned off when you move.
15. The average bill of a family in San Jose is $30 a year.
16. The minimum charge for water is $1.40 per month.
17. Meter readers read the meters once a month.

● FIG. 50.—*Traffic-light control and radio broadcasting are explained to members of the class.*

        18. The railroad commission has charge of setting the rate for the water.
    B. This information aided the children in adding the chapter to their book, "How Our City Gets Its Water."
    C. The San Jose Water Works building was built and placed on the map.

II. An excursion to find out "How Our City Is Protected."
    A. Arrangements were made to show the children through the Police and Health Departments.
    B. An officer escorted them through the cells, Traffic Bureau, Identification Bureau, Police Radio Broadcasting Station and the laboratory of the City Health Office.
    C. Information gathered:
        1. They do not keep people in the city jail very long.
        2. People receive citations for traffic violations.
        3. The Traffic Bureau keeps duplicate tickets.
        4. People have five days in which to pay their fines. If they do not come in during that time the fine is doubled.
        5. The fines are paid at the Traffic Bureau. If you haven't the money you must appear before the Police Judge.
        6. An officer at the Traffic Bureau lectures people so that they will become better citizens.
        7. Laws are made to protect the city and the people.
        8. The Traffic Bureau has control of the traffic lights. The controls for the traffic lights look like small iron boxes. All traffic lights are regulated by automatic clock devices except in case of emergency. It takes 25 seconds for the lights to change from red to green, and 5 to 7 seconds for the caution light to show.
        9. Pedestrians should not cross the street when the amber light is on.

FIG. 51.—*They visit the identification bureau and are finger printed.*

10. The traffic Bureau keeps a record of all the accidents that occur in the city.
11. The call of the San Jose Police Station is K.G.P.M. The police talk in code.
12. They broadcast to the following cars:
    a. Six radio police cars of San Jose.
    b. Three fire cars.
    c. One special-officer car.
    d. Two cars in Willow Glen.
    e. Three sheriff cars.
    f. One Morgan Hill car.
    g. One Santa Clara car.
13. The Identification Bureau takes fingerprints and photographs. They keep these on file. One copy is sent to Sacramento and another copy to Washington, D. C.
14. The Health Office tests the water of the city.
15. They test cups, spoons, glasses, etc., from restaurants to see that they are germ-free.
16. They test milk.
17. They test food.
18. They keep a record of the diseased in the city.
19. They publish these records in the paper.

D. The children used this information in writing the chapter in their book "How Our City Is Protected."
E. The City Hall was built and added to the map.

III. An excursion to find out another way in which our city is protected.
  A. Information gathered:
    1. The hook-and-ladder truck.
       It has a ladder that goes up 75 feet. The large net on the truck is made from heavy canvas. It is used when people jump from high places. It takes from eight to ten men to hold the net.

FIG. 52.—*Learning about another means of identifying persons.*

2. The chemical engine.
   It has two large tanks which contain soda and water. Another small compartment attached to the tanks contains the sulphuric acid. When these two chemicals are allowed to unite they form a fire-extinguishing fluid. They only use the chemical on small fires. The trucks are only supposed to go 25 or 30 miles an hour.
3. Mack pumping engine.
   The hose from the engine is attached to the fire hydrant from which it is able to pump 1,000 gallons per minute of water on the fire. Four streams of water can flow from the engine at the same time.
4. The tender or battery truck.
   It has a large nozzle to which four hoses can be attached. It shoots out as one torrent stream of water. This is used on large fires. The truck carries the large hoses which are used on the outside of buildings, and the smaller hose which is used for the inside of buildings.
5. The squad truck.
   This carries a small chemical tank, a stretcher, axes and rope.
6. People use the telephone more than the fire-alarm boxes when there is a fire.
7. In talking on the telephone you should not get excited, but give the fireman the address, and what type of fire it is.
8. People should never turn in false alarms.
9. They have been using automobile trucks instead of horses since 1915.
10. The firemens' quarters are upstairs. They sleep with their shirts on. Their pant's legs are inside of their boots so that they can jump into them quickly. They slide down the pole.
11. There is a long glass box at the fire station that records the fires that are turned in from the alarm boxes. A

machine punches the paper showing the number of the alarm box. They look at the chart hanging above the box, and know at once what street it is on.

12. There is a drill tower behind the station. It is four stories high. They practice putting up ladders, and climbing up and down. They practice jumping into the nets.

B. The children used these facts to finish their chapter on "How Our City Is Protected."

C. The fire station, hydrants and engines were added to the map.

IV. Excursions to gather information regarding our local school system.

The class was divided into three groups. One group visited the Woodrow Wilson Junior High School. The second group visited the San Jose Technical High School and the Senior High School. The third group visited the San Jose State College. On returning they planned reports to present to the class.

A. Group one presented their report on the Woodrow Wilson Junior High School. Facts given:
  1. There are 900 pupils in the school.
  2. Lessons begin at 8:30.
  3. When the bell rings they change classes.
  4. A traffic boy or girl stands on a white circle and watches the children as they go up and down the stairs.
  5. They have a large cafeteria. The girls of the high ninth grade take care of the food.
  6. They have excellent cooking rooms. Both boys and girls learn to cook.
  7. They learn to make clothes in the sewing rooms.
  8. There is a laundry room. They wash clothes in the washing machine, iron and mend them.
  9. Some of the high-ninth-grade boys made lawns, planted flowers, and arranged stepping stones around the building. They use these outside courts for plays, parties and luncheons.

10. Everyone has a locker. They can only open them at specified times.
11. The children use pastel crayons, charcoal, water colors and other mediums in the art room.
12. They sang three-part songs in the music room. Each child in the school must take music.
13. They have a boys' and girls' gymnasium. They also have athletic activities in outdoor fields.
14. They have a swimming pool. A teacher supervises the children's swimming education and they have a lifeguard for their protection.
15. They have a large auditorium. There is a new vitaphone in it.

B. The second group gave their report about the Technical and Senior High Schools in the form of a play. Facts given:
  1. They have a printing shop.
  2. They make clocks and boats.
  3. They learn to cast articles made of metals.
  4. There is a sheet-metal shop. They make the stars that the traffic boys wear. They also make the "Stop" signs.
  5. They were working on a water system in the plumbing shop. They learn to use the welding machine.
  6. There is a bank at the Senior High School.
  7. Many students learn to use the typewriter.
  8. Some have an adding and subtracting machine.
  9. Some students can write 100 words a minute in shorthand.

C. The third group gave their report about the San Jose State College in two dramatizations. The first dramatization was about art and science buildings. Facts given:
  1. They make lamps and weave rugs. They sketch charcoal drawings and posters. They construct puppets, vases, bowls and books. They make costume designs and large murals.
  2. They study chemistry, mineralogy, surveying, botany and nature study in the science building.

D. The other dramatization is as follows:

"We are going to give a play about the nursery school that is at the college," said Dorothy.

Act one—at the nursery. (*Mrs. Jones is bringing her little girl, Shirley, to the nursery.*)

Teacher. Oh, here comes Mrs. Jones with her little girl.

Mother. Good morning, Mrs. Smith.

Teacher. Good morning, Shirley.

Mother. How long will she be here?

Teacher. She is going to be here from 10 A.M. to 1 P.M., as we do every day.

(*When the two women were talking, Mrs. Jones happened to look at the chart which told what the children were going to have for lunch.*)

Shirley. Oh, mother, may I go out and play with the other children?

Teacher. Before you go outside and play you must take your coat off, wash yourself and take a glass of water.

(*After Shirley did what the teacher said she went out to play.*)

Mother. Where will she eat?

Teacher. First she must rest on a small cot before she eats and the children will eat at these small tables.

Mother. I will come after Shirley at 1 o'clock. This is a regular house, I see, with a kitchen, dining room, bathroom and a yard. I am sure Shirley will be happy here.

(*Shirley enters.*)

Shirley. How many children am I going to have to play with and how old are they?

Teacher. There are 20 children from the age of eighteen months to four years old.

Shirley. Good-by, Mother. I think I will like it here.

Sarah. This play was written by Dorothy, Constance and me.

TEACHER. I am sure that we know more about all of these schools than we did before and we will be able to write our next chapter on schools of San Jose.

V. Excursion to find out how San Jose communicates with the world.

The class was divided into three groups. One group visited the post office, the second group the telegraph office and the third group the newspaper office. Earlier in the term the whole class had visited the telephone company and the radio station.

A. The first group presented their report on the telegraph company. They sent a telegram to the teacher telling her that they would tell the class about their excursion. Facts given:
   1. The telotype machine sends messages and receives them.
   2. When the messages come in they are typed on narrow rolls of paper. They are cut and pasted on the blanks. Messenger boys take them to the people to whom they are addressed.
   3. A telegram can go to New York in 43 minutes.
   4. The telegrams usually cost 5 cents a word.

B. The group that visited the post office presented a dramatization "How a Letter Travels through the Post Office." Facts given:
   1. The letters are canceled in the canceling machine. The stamps can never be used again.
   2. They are placed in the primary cases.
   3. They are sorted again in the wings.
   4. They are put into the racks.
   5. They are locked in the pouches and trucks take them to the depot.
   6. Each postman has a number.
   7. He sorts his mail according to the streets and numbers on the houses. He has his own route.

FIG. 53.—*The class studies transportation by visiting the railway station.*

NO PARKING
NO PARKING

8. There are four classes of mail. The first class is the letters, the second class is the newspapers, the third class is the circulars and the fourth class is the parcel post.
9. The searching department takes charge of letters that have the wrong address.
10. A special-delivery letter costs 10 cents extra.
11. An airmail letter costs 6 cents.
12. Children must not play with the mail boxes.

C. The third group gave their report on newspapers. Facts given:

1. The types are called linotype and monotype.
2. The type page was put through the press, where it prints on the matrix. This is put through the press and the lead type is made which is ready for the press. This is put in the press where the newspaper runs through and is printed.
3. The news comes in from all parts of the country. These machines are called telotype machines. There are three receiving machines and one sending machine.
4. There are different types of editors and reporters.
5. They keep old pictures for many years.

D. The children used this information to write the chapter in their book on "Communication."

E. The post office, mail boxes, etc., were added to the map.

VI. An excursion to find out about transportation. Arrangements were made and the children visited the depot and the trains.

A. Facts gathered:

1. Tickets are purchased in the waiting room.
2. Baggage is checked in the baggage room. The people write out duplicate tags, and receive one of them.
3. It is necessary to walk through a subway to reach the trains.
4. All trains do not carry mail.
5. Mail to small stations is sorted on the train.

● FIG. 54.—*They learn how to purchase tickets.*

TRAVELERS
TICKETS

6. The most valuable shipment that a train carries is raw silk.
7. Freight moves slowly and is cheap.
8. Mail moves rapidly and is expensive.
9. Parcel post moves fast but is cheaper than mail.
10. They have stores in baggage cars.
11. There are 30 trains to San Francisco daily.
12. A man tests the journal box with his hands when the train stops long enough at a depot.
13. The wheels of a car are on trucks.
14. Couplers hold the cars together.
15. A steam pipe and an air pipe run through the cars.
16. The small racks inside the cars are for hats and small packages.
17. There are 90 seats in a large car.
18. They have electric lights in the cars.
19. People sleep in pullman cars.
20. The porter makes two berths at each two seats.
21. People put their clothes in the net.
22. They can load five trains at one time.
23. The Red Caps will carry your bags.
24. The parlor cars are more expensive.
25. People eat in the dining car.
26. Taxis bring people to and from the depot.
27. Busses and street cars bring people to and from the depot.
28. People sometimes go on busses instead of trains.

B. This was the last excursion, and the children wrote the final chapter in their book on "Transportation."

C. The depot, trains, automobiles and busses were added to the map.

CULMINATION OF THE UNIT

As can be readily seen, the foregoing experiences and discussions by the children on their excursions had given them a sufficient amount

● Fig. 55.—*An official tells them about the different types of trains.*

of accurate material upon which to complete the construction of their city. Every important building of the community was built and placed in its proper location. Street signs, trees, shrubs, fire hydrants, automobiles, etc., were made for the city. Strings were placed from the source of each basic need of every individual to a typical home of the community. In this way the children were able to see the relation of the community to the home.

The children's understanding of the excursions that they had taken and the facts they learned have been evaluated by them in their book "Our Community of San Jose."

The first chapter in the book tells of a family in San Jose expecting the arrival of relatives from New York.

Characters:

Family in San Jose
- The Mother—Alice Woods
- The Father—William Woods
- The Son—Billy Woods
- The Daughter—Beverly Woods

Relatives
- The Mother—Myra Martin
- The Father—Fred Martin
- The Son—Ted Martin
- The Daughter—Nancy Martin

The story is woven around these characters and their experiences while visiting in San Jose.

CHAPTERS

I. Our City
II. Our City's Food Supply
III. Our City's Water System
IV. How Our City Is Protected
V. Work of the Community
VI. Schools of Our City

FIG. 56.—*Most of them had never been in a train. Soon after this picture was taken a switch engine hooked onto the car and took them for a short ride.*

VII. Recreation

VIII. Communication

IX. Transportation

The text of the completed book was too long to include in this account, so only one chapter, "How Our City Is Protected," is given.

CHAPTER IV

HOW OUR CITY IS PROTECTED

"Oh, Mother," said Billy very excitedly as he came running into the house from school, "we just saw an accident. We were on the corner. A large truck came along and went through the red light. The driver didn't wait for the lights to change. The truck hit another car and tore the fender off."

"People should drive more carefully," replied Mother. "Just think, the truck driver only needed to wait 25 seconds before the light would change to green."

"Well, Mother, we were very careful on the way home from school. We watched the traffic lights very closely. We remembered what you said about the amber light. We are not to cross the street when that light is on. They put caution on that light because it means stop."

"The reason that the automobiles go across when the amber light is on is because they go faster than people on foot can."

"Where do they control these lights?" asked Nancy.

"They control these lights at the Traffic Bureau," Mother replied as she looked at the excited faces.

"We saw the policeman give the man who was driving the truck a ticket for driving carelessly," remarked Ted.

"He will have to go to the Traffic Bureau and give his ticket to the man who is there," answered Mother. "Children, do you know it is the same as being arrested? The man now has to pay his fine or go to jail."

"Supposing the man did not go to the Traffic Bureau with his ticket?" asked Ted, who was always interested in finding out about everything.

"Well, they wait for five days for him to come. If he does not, they double the fine. If he doesn't come then they send out a warrant for his arrest. Do you children realize that all of these laws are made for your safety?"

"At our school," added Beverly, "we have our rules for safety. We have traffic boys to see that we get across the street safely."

While they were talking about safety Bill turned on the short-wave radio set.

K.G.P.M. calling. K.G.P.M. calling. San Jose Police Department. Time 4:10. Test Call. That is all.

Everyone stopped talking and listened. In a few moments the call was repeated.

"Mother, what do they mean by a test call?" asked Beverly, as she listened to the radio.

"They give a test call to see if the radios in the police cars are working," answered Mother. "When they give a real call they talk in code. When the police who are in the cars receive the message, they go to the house or place where there is trouble. This is another way that the city is protected."

"How many police cars have you in San Jose?" Ted asked. "New York has many, many cars."

"We have six police cars that have radios in them. They also broadcast from the City Hall to the other cars."

"What do they do with the suspects when they bring them to the police station?" asked Nancy.

"They put the suspects into cells but do not keep them there very long. If they are convicted they send them to the county jail. These people are taken to the identification bureau. They take their pictures and fingerprints. A record is kept of these pictures and fingerprints. They send a copy to Sacramento, and another copy to Washington, D. C. No matter how you change, children, your fingerprints always remain the same."

After the children had rested, they went outside to play. While they were skating on the sidewalk, Nancy glanced across the street and noticed a red sign on a door. Nancy read the letters that said, "Quarantine."

"Who puts those signs on the houses?" asked Nancy as she brought her skates to a stop.

"Why the city Health Office does," replied Beverly. "They protect us in many ways, you know."

"What do you mean by that?" said Ted. "How do they protect us?"

"The City Health Inspector puts up signs where people are sick. It means that no one should enter the house or leave it. He keeps a record of all people that are ill. At the end of each month they publish this list in the paper."

"I had scarlet fever once," said Billy. "They had to give me a permit before I could go back to school."

"They also go to restaurants and test their food and dishes," added Beverly, feeling very important that she knew something that they did not.

"Billy, why do they have to do that?" asked Ted.

"The inspector tests these things so that the people will not eat germs," answered Billy.

"Yes, and that isn't the only thing that they test," said Beverly. "They also test the milk and the water."

"How do they test the water?" Nancy asked.

"Last week we went to the Health Office and saw what they did," said Billy. "They put the water into test tubes with other materials and put it into the refrigerator. If the water turned red they knew that it was pure. If it turned yellow they would tell the water company to put chlorine into it, because it had germs."

"Do they test the milk the same way that they do the water?" asked Nancy.

"No, they do not," answered Billy. "They test it to see if it has any germs and also to see that no water has been added to it."

"The Health Office certainly protects the people in the city in many ways," ended Billy as they skated farther and farther up the street.

All of a sudden they heard the sound of a fire engine coming down the street. They saw smoke pouring from the chimney of the San Jose hardware store. The lights on the corners all changed to red and the bells rang telling people to drive their cars to the curb and all traffic coming the other way to stop.

The brave firemen soon had the small blaze under control, and clang, clang, the engine returned to its station on Market Street.

"Would you like to visit the station?" asked Billy. "I know the firemen very well, and I am sure that they wouldn't mind showing us around. I certainly enjoy sliding down their pole."

"We certainly would," Ted replied. "Come on, let us skate as quickly as we can."

When they came to the corner, they removed their skates and walked across the street.

They soon arrived at the fire station. They were a little out of breath but very happy.

"Hello, Captain," said Billy. "These are my cousins from New York and I was wondering if you would mind showing them around."

"All right, Billy. You look like nice children who have learned that you shouldn't play with matches and turn in alarms unless there really is a fire," laughed the Captain.

"Here is the hook-and-ladder truck. We use it for putting out fires in tall buildings," said the fireman.

"I wonder how high this ladder will reach?" asked Ted.

"It reaches 75 feet," replied the fireman.

"What are those tanks for in that truck?" questioned Nancy.

"That is the chemical truck. It is used for small fires. You see the two tanks there? They are filled with soda and water. There is a smaller container on each tank. It is filled with sulphuric acid. Where there is a fire, they turn the container around so that the water, soda and acid form a gas. Each tank holds 80 gallons. We use these for small fires like chimneys or automobiles.

"Now this truck is called the Mack pumping truck. When there is a fire, we attach the hose to the fire hydrant. We attach the other end to the fire truck. Did you know that the water had to go through the engine before it comes out of the hose?"

"No," they all cried, "we didn't know that."

"See that little lever on the side of the truck? The firemen control the water with that. If that lever is pushed down, 1,000 gallons of water come out in one minute.

"Four hoses can be attached to this truck."

"How fast does this engine go?" asked Ted.

"Well, we are only supposed to go 25 or 30 miles an hour. This truck is the engine, and this truck over here is the tender that goes with it. It carries the large hose, which is 2½ inches wide, and the small hose, that is 1½ inches wide."

"What do you have the different sizes for?" questioned Nancy.

"We use the large hose for the outside of the building, and the small one for the inside.

"Do you see this large nozzle on top of the truck? We attach four hoses to it, and it makes one torrent stream of water to be used on large fires. We also carry axes, ropes, hats and other equipment.

"Now this is the squad wagon. It has a chemical tank holding about 25 gallons of soda and water. It has a stretcher in case of an accident. It also holds the rest of the firemen and the things that they need."

"This is the one that was just out, isn't it?" interrupted Billy.

"Yes, and now they will wash and polish it again. They always keep them clean and shining you know.

"Would you like to climb these winding stairs, now, and I will show you where the telephone calls come in. Watch your step. Well, what do you think of this little room. Until 1915 they kept hay here for the horses who pulled our trucks at that time."

"It must have been exciting to see the horses galloping down the street," said Nancy as she looked around her.

"Well, young people," interrupted another man, "do you see this switchboard. This is where the calls come in when you telephone that there is a fire. Do you know what to say, son?"

"Yes," returned Billy, "I would tell them where I live; and what kind of a fire it is—large or small."

"That is right," replied the man. "You must also remember not to get excited, but to speak slowly and distinctly. When the call comes in I ring the other departments and the engines are soon on their way."

"A few more steps now," said the Captain, "and I will show you where the firemens' quarters are."

They climbed the steps and saw several large rooms with beds in them, also several small ones.

"How do the firemen that are sleeping get to the fire so quickly," asked Ted.

"Well, I'll show you. They go to bed with their shirts on. They leave their pants on the floor inside of their boots. All they have to do is step inside of the boots and they are dressed. Their coats and hats are already on the trucks. Then they grab this pole and slide down."

"Oh, may we slide?" asked Ted.

"All right, if you are careful," replied the Captain. "I'll go first."

They slid down the pole and landed on the soft mat at the bottom.

"What fun," remarked Ted. "I think that I would like to be a fireman. Oh! what is that long glass box for?"

"I'll tell you," said the Captain. "If you haven't a telephone, go to the corner where there is a fire-alarm box. The box tells you how to turn in the alarm. After you have turned in the alarm, this little box punches the number of the alarm box on the paper. We then look on our chart and find what street the box is on. You must stay on the corner until the fire truck comes and direct them to the fire. But remember, children, never to turn in an alarm unless there really is a fire."

"Now let us go back to the station and I will show you our drill tower."

The drill tower was six stories high. The firemen would drive the hook-and-ladder truck there and place it against the building. The firemen practice climbing the building to see how fast they can save the people. They practice jumping into the net, but not more than two stories high. They also take ropes up and slide down them.

"Well, children, I guess this is about all that we have to show you."

"Thank you for showing us around," chorused the four children. "We appreciate it very much." They waved good-by to the firemen and skated homeward.

SPECIFIC OUTCOMES OF THE WORK AND EXPERIENCES OF THE CHILDREN

I. DEFINITE KNOWLEDGE OBTAINED.
  A. How a city is planned.
  B. Maps, their uses and values.
  C. Source of food and water.
    1. Dairies.
    2. Wholesale markets.
    3. Canneries.
    4. Retail stores.
    5. Driers.
  D. How the city provides for health and safety of the people.
    1. Health Office.
    2. Hospital.
    3. Police Department.
    4. Fire Department.
  E. How the city is educated.
    1. Elementary schools.
    2. Junior high schools.
    3. Senior high schools.
    4. State college.
  F. How the city provides for leisure time.
    1. Parks.
    2. Libraries.
    3. Playgrounds.
    4. Recreation centers.
  G. Understanding of industries and activities.
  H. Understanding of means of communication of the city.
  I. Understanding of transportation of the city.

II. HABITS AND SKILLS.
  A. Discussion period.
    1. Keeping quiet when others are speaking.
    2. Speaking naturally without raising hands.
    3. Being a good listener.

        4. Not being selfish but letting other people participate.
        5. Being polite.
        6. Not interrupting.
    B. Construction period.
        1. Not disturbing other people.
        2. Helping others.
        3. Cooperating with others.
        4. Cleaning after one has finished.
        5. Skills in handling materials.
    C. Related English.
        1. Participating orally at every lesson.
        2. Being a good audience.
        3. Helping others with suggestions.
        4. Using good English.
        5. Increasing vocabulary, especially written.
    D. Related reading.
        1. Being able to locate material needed.
        2. Being a good audience.
        3. Developing proper habits and skills in reading.
    E. Appreciation period.
        1. Being a good audience.
    F. Skills and drills.
        1. Acquiring the right habits in arithmetic, spelling and handwriting.
    G. Citizenship Club.
        1. Learning obedience.
        2. Strengthening citizenship.

III. ATTITUDES AND APPRECIATIONS.
    A. A new interest is awakened in the activities of a community.
    B. The relationship of the community to the home is seen.
    C. The need for cooperation with those who are associated with community life is understood.
    D. The children appreciate what the community does for them.
    E. They appreciate and evaluate work done by the group.

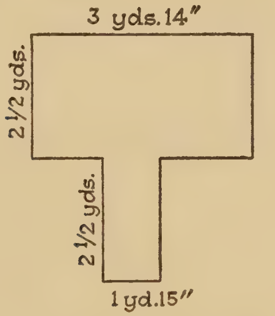
SECTION II. SUBJECT MATTER AND METHODS

PRODUCERS' ENTERPRISES

I. Making map.

A. Materials.

1. Butcher paper.
2. Chalk.
3. Yardstick.
4. Map of city.
5. 1 inch molding.
6. Black calcimine.
7. White sand.
8. Brown sand.
9. Green calcimine.
10. Glue.
11. Paste.

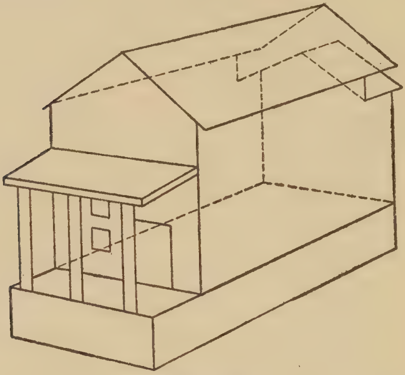


B. Methods.

The paper was cut in the above dimensions and pasted together. The molding was nailed on the edges to hold it to the floor. It was then painted black. The children with the help of the teacher put a cross on the map where they lived. They likewise put crosses where the contemplated visits would be. Lines were drawn on the map, and the enclosed space was in the form of a "T." They counted the numbers of streets and by division decided the width of them and the blocks. The main streets were 4 inches wide. The blocks varied. The average was 7 inches wide and 15 inches long. The sand was colored green by adding green calcimine to it while wet. It was allowed to dry. Glue and paste were brushed on the paper and a thin layer of sand was added. White sand was used the same way on the streets, brown sand for the business district, and blue sand for the two creeks.

II. Other city needs.

A. Trees were made from sponge painted green and candy sticks for trunks. They were held in place by a paper clip with the aid of two thumbtacks.



Wooden house

The walls and roof were made from cigar boxes and painted with calcimine.

Cardboard-box base	Wooden part
9¼ inches long	7 inches high
4½ inches wide	7¼ inches long (ridgepole)
1¼ inches high	Root from eaves to ridgepoles 3½ inches

B. Shrubs: sponge painted green.

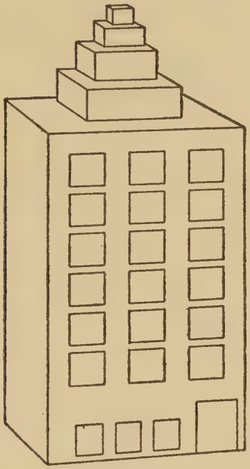
C. Street signs: names printed on tagboard with small printing press. These were attached to candy sticks with adhesive paper. A paper clip kept them in place with the aid of two thumbtacks.

D. Fire hydrants: Tagboard shaped as a pole and painted silver.

III. Buildings.

IV. Making house plans.

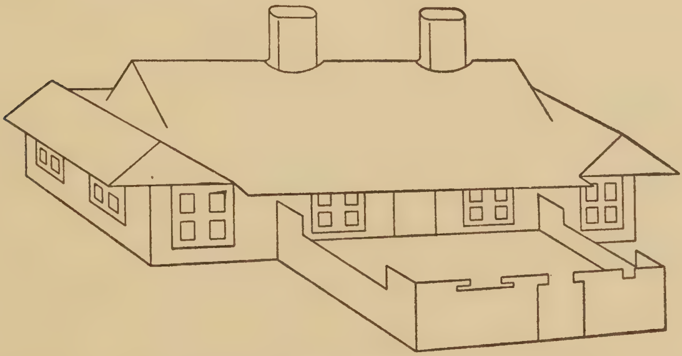
With the aid of pencils and rulers the children sat in front of their homes and sketched them. The perspective was not correct in all



Bank of America

Made of one large box with four of graduated sizes for the tower. It is plastered with one cup of salt and two cups of flour.

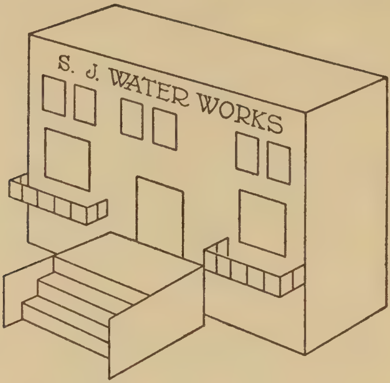
Height, 16 inches
Width, 8½ inches
Length, 6½ inches
Bottom box of tower, 5 inches square
Top box, 2 inches square



Stucco House

Made of one large box for main part; one small box for main part; oak tag for roof and chimney. Plastered with salt and flour, 2 cups flour, 1 cup salt

	Porch
Height, 2½ inches	Height, 1¼ inches
Length, 7 inches	Length, 3¼ inches
Width, 3¾ inches	Width, 2¼ inches

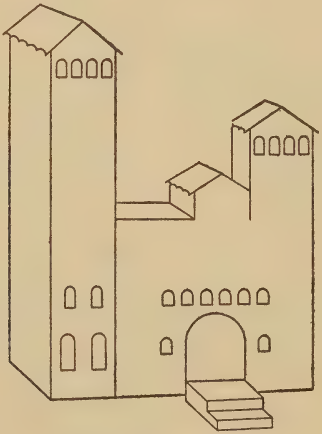


San Jose Water Works

This building is made out of two boxes with oak tagboard. Plastered with a mixture of 1 cup salt and 2 cups flour and yellow calcimine.

Height, 8½ inches
Length, 11 inches
Width, 4 inches

Steps
Height, 2 inches
Length, 5 inches
Width, 4 inches



San Jose State College

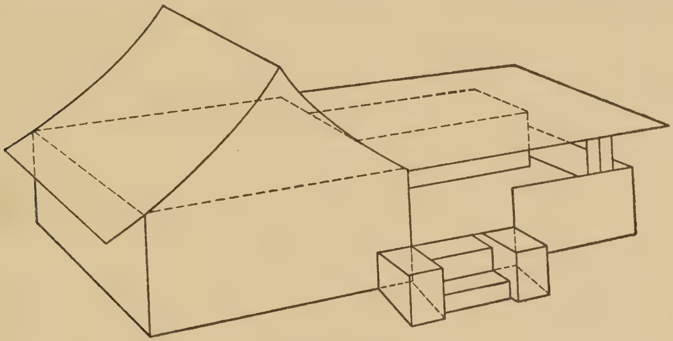
Made of four boxes, colored gray—plastered with 2 cups flour—1 cup salt, black calcimine. Corrugated paper is used for the roof, painted with red calcimine.

Width, 16 inches
Tallest tower, 18½ inches
Middle tower, 12 inches
Third tower, 14 inches

cases, but their pictures gave a good idea of their homes. They colored the drawings with crayons. These were placed on the board and used as patterns in constructing their homes from cardboard, wood, etc.

V. MAKING A FRIEZE.

The children sketched the places visited while on their excursions. On returning they improved upon these. The best one was chosen.



Paper House

One of the typical houses made by the children. This one is made of three boxes. It is covered with paper, being attached to the boxes by adhesive paper.

Width, 4 inches
Length (total), 11¼ inches
Stairway, 3 inches
Slanted roof, 5 inches

The child then made his picture on colored construction paper. He used black crayon to bring out the lines. These were placed on the border, which was lined with blue shelf paper. Each child then made a stick figure of himself with crayons. These were cut out and placed in front of the building. Letters were cut out telling the name of the building and placed under each section. The frieze grew, until finally 15 buildings filled the spaces.

VI. RELATED ENGLISH.

A. Composing verses.

THE FIREMAN

Roll, Roll, Roll on ahead,
When we go by the lights are red.

When we come whizzing down the street,
We see the policeman on his beat.
The fireman wears a suit of red,
He wears a hat upon his head.
He goes to fires both big and small,
He never goes too fast at all.
Frank Etchison

EVERYONE'S FRIEND

The policeman is our very best friend,
His life for us he would end,
The policeman is always on his beat,
He helps old people across the street,
Our policeman watches us every day,
And in the morning as we play.
Richard Laden

THE FIREMAN

Away, away to a fire he goes,
When he gets there he fastens the hose,
He turns on the water till the fire is out.
He certainly knows what he is about.
Constance Dallas

- Fig. 57.—*Measuring and planning a map of the section of the city in which they live.*
- Fig. 58.—*Colored sand is used to lay out the blocks.*
- Fig. 59.—*The streets are labeled and houses begin to appear.*
- Fig. 60.—*As members of the class complete the building of their own homes, they make the buildings they have visited while learning about their community.*
- Fig. 61.—*The group surveys the completed map.*
- Fig. 62.—*The home is dependent upon many types of occupations and services in the city.*

OUR CITY HEALTH CENTER
SAN JOSE

OUR CITY HEAL
CENT

SAN JOSE
CALIFORNIA
HOW THE HOME DEPENDS UPON THE COMMUNITY.

THE POLICEMAN

The policeman is our very best friend,
He always has a helpful hand to lend.
He wears a uniform of blue.
He gives people tickets too.

Betty Lou Costanza

FIRE ENGINES

I like to watch the fire engines go clang,
clang down the street.
As they pass the butcher shop's window so
full of meat.
The engines are so shiny and bright.
They even hurt my eyes at night.

Lawrence Bulawsky

OUR POLICEMAN

On a windy night he went out into the street
To catch a burglar tiptoeing on his feet.
He saves us from every danger he can.
He's King, our policeman.

He's very tall and straight.
He never gets home until late.
All the children think he's grand,
But he's King, our policeman.

At his corner, on his beat,
He watches the traffic on the street.
Everyone thinks he's grand,
He's King, our policeman.

Elden Carley

ALUM ROCK PARK

Hurry, hurry, here we go,
To Alum Rock Park, you know,
My, there are so many things to do,
To swim and slide the whole day through.

Robert M.

THE LIBRARY

When I go to the library,
I look around and what do I see,
Books here and books there,
Books on the shelves and everywhere.

Ralph Haverson

TENNIS

Let's all go to the tennis court
Where outdoor sports are gay.
There we will have lots of fun
And tennis we will play.

Dorothy Roberts

SWIMMING

I like to go swimming when it's *hot.*
It is such fun, I like it a *lot.*
Before I go in I take a shower
And when I come out it is almost noon hour.

Constance Dallas

THE SWIMMING POOL

The swimming pool is so blue,
I like to go there, don't you?
To swim and dive all the day
It is very pleasant I would say.

Amelia

SWINGS AND SEESAWS

I like to go to Alum Rock
To play with the things they have.
They have some swings and seesaws, too,
So we can have lots of fun with you.

Betty Peres

B. Riddles.

I drive a big red truck.
All the people say that I am very brave.
Sometimes I wear a big black overcoat.

Children always come to visit me.
I always perform my duty.
Who am I?
Sarah Mazzarese

I drive a car that goes to every house.
I am dressed all in white.
Who am I?
Daniel Garcia

I sell goods.
People buy things from me.
I sell things you like to eat.
Who am I?
Dorothy Simeoni

I go to many houses.
There I leave packages for the people.
Can you tell me what I am?
Gertrude Giordano

I am a man in red.
At night when I am in bed,
I hear a fire alarm ring.
Out of bed I have to spring.
Who am I?
Glendawon Melcher

You hear my siren ahead.
When I'm coming down the street
The lights for me are red.
What am I?
Richard Laden

I am tall. I wear a uniform of blue.
You see me take children across the street
When I am on my beat.
Who am I?
Eddie Tobash

Just see me slide down a pole
And to the fire I do go.
Into the wagon
Out on the street
We pass the policeman
On his beat.
I am a brave ____________

Dorothy Roberts

You see me go by your home very fast.
Some children like to watch me go past.
Who am I?

Constance Dallas

I am very tall
In fact I am 14 floors high.
You have to take an elevator to reach my top.
What am I?

Lawrence Bulawsky

C. Writing letters of appreciation and their replies.

Lincoln School
June 2, 1936

DEAR MR. BLASE:

The class wishes to thank you for allowing us to visit your wholesale store. We learned a lot from what you had told us. The different things you showed us were very interesting.

Sincerely yours,
HIGH FOURTH GRADE

San Jose, California
June 5, 1936

High Fourth Grade
Lincoln School,
San Jose, California.

DEAR CHILDREN:

Many thanks for your kind letter of appreciation after your recent visit to our plant. It was a pleasure to have had the opportunity to show you and tell you of the different commodities we handle and where they come from.

It would be well for those of you who are interested to come again at some future date, particularly during the winter months when practically a different line of goods is handled. We can assure you it will be very instructive.

Hoping to have the pleasure of entertaining you again, we are

Yours very truly,
BLASE BROS. & COMPANY
By A. A. Blase

AAB:CR

Lincoln School
June 2, 1936

DEAR MR. FORD:

The class wishes to thank you for telling us interesting things about water. We learned many interesting things we did not know before. We appreciate every thing you told us.

Sincerely yours,
HIGH FOURTH GRADE

San Jose, California
June 6, 1936

High Fourth Grade,
Lincoln School,
San Jose, California.

DEAR STUDENTS:

The San Jose Water Works appreciates very much your letter of June 2, 1936, thanking the Company for the talk given you by the writer.

We wish that more of the residents of this City would show the same interest as you have shown in its public water supply. This Company has spent thousands of dollars to protect the purity of the water delivered to you. Consequently, when you draw a glass of water from your faucet, you can rest assured that it is as pure as it is humanly possible to make it.

If we have, in a small measure, aided in your education, we feel it was only our duty, and we wish you to know that this Company is willing and ready to assist you at any time.

Yours truly,
J. W. FORD,
Engineer

JWF/C

D. Telephone Conversations.

A Typical Conversation

Columbia 108. Hello, Lincoln School?

Yes.

I'd like to talk to the high fourth grade.

Hello, is this the high fourth grade? I heard you have taken many trips. Could you tell me something about them?

Yes, we could. We went to the top of the Bank of America Building.

That must have been exciting.

Yes, we could see all over the valley.

Could you see the air base?

We could see it very plainly. I could see the dome on Mt. Hamilton, and all of the important streets and buildings of San Jose.

Did you take any pictures?

Yes, we took them in four directions. We also drew maps while we were there.

I wish that I had been along with you.

Well, perhaps you will have the opportunity sometime.

Thank you for telling me about it. I must finish my work now.

Good-by.

Good-by.

E. Other English activities included stories, reports, their continuous story of San Jose, pantomimes, dramatizations and the March of Time broadcast. Every Friday they stood before the microphone and gave the news of the week. This was an excellent review.

VII. CREATIVE RHYTHMS AND RELATED PHYSICAL EDUCATION.

A. Postmen.

1. Music: "A Garden Dance," by G. Vargas.
2. Method:

"Have you ever seen the postman come to your door? Sometimes he sorts out the mail, then puts a letter in your box. Let us be postmen and see how many different things we can do." (Play music over once; select some children to go to stage.)

3. Some of the rhythms they created:
    a. Little jumping steps for going upstairs.
    b. Sorting out mail.
    c. Putting letters in box.
    d. Carrying loaded pack on back.
    e. In one pattern, the girls were loaded down, sorted out the mail, put some in boxes, went downstairs with running step, gave little dance step and on final chord held out hand as if to give out a letter.

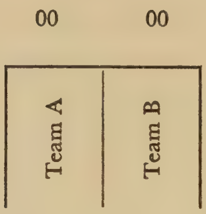
B. Prune Pickers.
1. Music: "Rustic Dance," by C. R. Howell.
2. Method:

"How many of you have ever picked prunes? Show me how you do it. Let us pretend we are prune pickers and do what they would do." (Play music over once. Select some children to go on the stage. Have them create the rhythm as you play.)

3. Some of the rhythms they created:
    a. Shaking the tree.
    b. Putting prunes into a large basket.
    c. Picking them off the ground.
    d. Eating the prunes.
    e. In one pattern, they walked over to the trees, picked some prunes off the ground, shook the tree, gave a little dance step to empty their load, straightened up and went back to the tree to eat some fruit.

C. City Planning Relay.

The class is divided into two teams, each standing back of its goal line and each having two circles about 25 feet from the goal line. The first player in each line is given three erasers, bean bags or sticks which are called stakes. These must be carried in one hand. At the signal "go" the first player in each line runs to the circles and with one hand places the erasers in one circle in an orderly arrangement; he then runs back to tag the second player who runs up and changes the bags to the other circle also only using one hand. Variations of hopping, skipping and walking may be used.



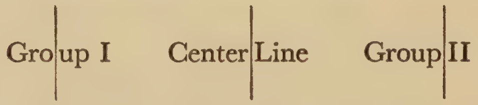
D. Policeman's Guard.

The class forms a large circle, not holding hands. One person is chosen to be a policeman; three or four other people are the citizens who hold onto each other's shoulders and the first one takes hold of the policeman. A ball is passed around the circle. The object is for any player in the circle to hit one of the "citizens." If he succeeds, the citizen must join the circle. The policeman is the only one inside the circle who can touch the ball so as to prevent the "citizens" from being caught. The ball should be thrown at the feet of the people inside.

E. Game for Industries, Lemonade, What's Your Trade?

1. Method:

Divide class into two groups facing each other.



Group I decides upon a trade to demonstrate. They come to center line saying:

Group I. Here we come.
Group II. Where from?
Group I. San Jose.
Group II. What's your trade? Get to work and show us.

Group I goes through a pantomime doing some work. They may be typing, washing windows, building, etc. When someone on opposite side guesses what it is, all on group I run back to their line. Anyone caught must go to other side.

Group II now has its turn.

F. Game for Communication, Drop the Handkerchief.

Instead of "dropping the handkerchief, we drop a telegram."

1. Method:

Children form circle with one person the "telegraph boy." This person has object in hand (bean bag or handkerchief) and as he goes around the circle, says, "I have a telegram, it isn't for you, it isn't for you," etc., until he places it behind one person and says, "but it is for you."

The child receiving the "telegram" picks it up and runs after the telegraph boy who is trying to get into the other's place.

For variation, have the children skip or hop around the circle instead of walking or running.

2. Source: MANUAL OF PHYSICAL EDUCATION ACTIVITIES FOR ELEMENTARY SCHOOLS, N. P. Neilson and Winifred Van Hagen, California State Printing Office, Sacramento, 1929.

G. Other Games:
  1. Industries.
      a. Building a House, MANUAL OF . . . , ACTIVITIES, page 84.
  2. Protection.
      a. Policeman, page 128.
      b. Firemen, page 80.
      c. Fire engine, page 133.
  3. Communication.
      a. Newsboy, page 122.
  4. Transportation.
      a. Railroad train, page 120.
      b. Automobile relay, page 119.

H. Other Rhythms:
  1. Music: "Vegetable Men," Swedish dance song, Air by Gustaf Hagg.
     Children interpreted vegetables.
  2. Music: "The Traffic Light," Music Hour in the Kindergarten and First Grade.
     Children interpreted the policemen and cars.

VIII. ART.
- A. Materials: white drawing paper and water colors.
    - 1. House scenes.
    - 2. Figures as the policeman, firemen, etc.
    - 3. Park scenes.
    - 4. Transportation: cars, streetcars, airplanes, etc.

IX. CREATIVE MUSIC.

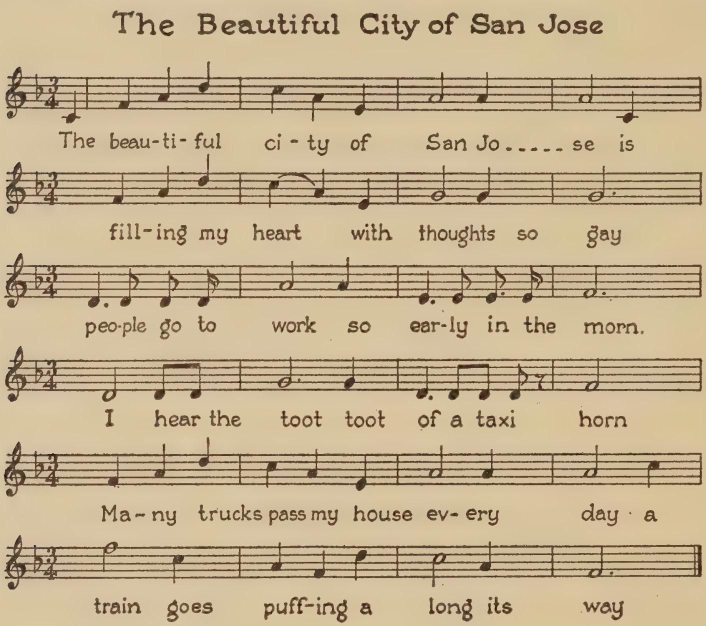

The Beautiful City of San Jose
The beau-ti-ful ci-ty of San Jo..... se is
fill-ing my heart with thoughts so gay
peo-ple go to work so ear-ly in the morn.
I hear the toot toot of a taxi horn
Ma-ny trucks pass my house ev-ery day a
train goes puff-ing a long its way

FIG. 63*a*.

X. DRAMATIZING STORES.
- A. "The Grocery Man, HERE AND NOW STORY BOOK by Lucy Mitchell.
- B. DIGGERS AND BUILDERS by Henry B. Lent.

XI. STORYBOOK CLUB.

The club meetings were held in the school library once a week. The children had read books and made many things to make them interesting to other people. While reading or talking to the group they would show peepshows, book rolls, pantomimes, pictures, puppet shows, etc.

The club had a president and secretary. The children would inform the secretary that they would like to give something for the following week. They worked out everything themselves. The two librarians took charge of giving and receiving the books. They likewise kept a list of the overdue books and reminded the children to return them.

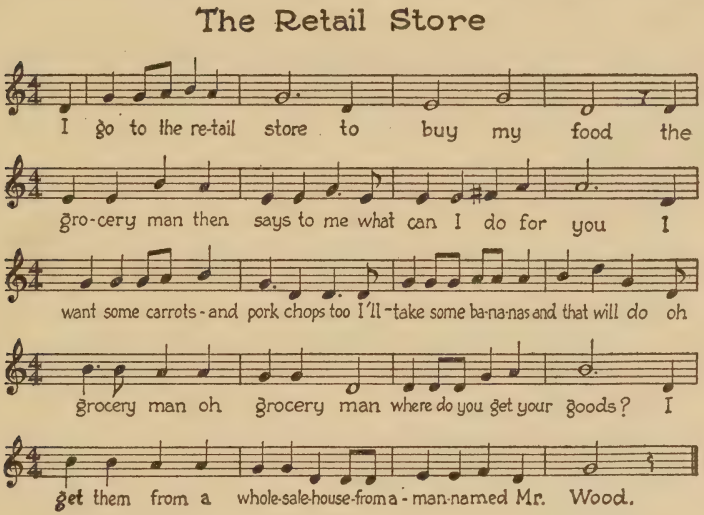

The Retail Store
I go to the re-tail store to buy my food the
gro-cery man then says to me what can I do for you I
want some carrots-and pork chops too I'll-take some ba-na-nas and that will do oh
grocery man oh grocery man where do you get your goods? I
get them from a whole-sale-house-from a-man-named Mr. Wood.

FIG. 63*b*.

XII. READING TO THE GROUP.

At least once a week the children selected a book from the reading shelf and prepared something to read to the group. They made something as a book roll, peepshow, riddles, questions, pictures, to make their presentation interesting. Other times they would pantomime, dramatize, have puppet shows or give unfinished paragraphs.

They presented these in the form of an amateur hour, with a child in charge. As each contestant came forward a check was placed on the Audience Reading Chart showing that he had read that week. His name was likewise written on the board. After all had read the leader told them to judge each contestant for the following things:

A. Reading clearly without errors.

B. Standing tall.

C. Making his voice interesting.
D. Making his book interesting.

The children would then clap for each contestant. The child receiving the loudest applause would be chosen as the best reader of the week.

XIII. SPELLING.

The children chose their own spelling list from the words that were in their story and other written work. The list was constantly checked by the teacher to see that they were not including words that were too difficult.

XIV. EXCURSIONS TAKEN BY THE GROUP.

A. Top of the Bank of America to view the city.
B. City Planning Commission to get the plans of the city.
C. Retail stores.
D. Wholesale stores—grocery, fruits and vegetables, meats.
E. Hotel.
F. Water works.
G. Police Department.
H. Health Department.
I. Fire station.
J. Parks.
K. Junior high school.
L. Senior high school.
M. State college.
N. Telegraph Company.
O. Newspaper.
P. Post Office.
Q. Telephone Company.
R. Radio station, K.Q.W.
S. Southern Pacific Depot.

XV. HEALTH CLUB.

The children elected a health inspector. Each morning she would hold up a box that contained all the health rules. A child would pick one from the box and read it. The inspector asked all those that had followed the rule to raise their hands. Those that did not received a check after their name on the chart.

Rules — Rules

Inspector

Our Cities
Health Center

Names

Health stories and plays were also given at this time.

XVI. Citizenship club.

The room was organized as a city. They had a city manager, city council, health inspector, police judge and two policemen.

The children made definite rules for their conduct in the room and on the playground. The policemen were to write down the names of the people who did not follow these rules. At the end of each day the judge called the court to order. The policeman would read a child's name who had broken a law. He would be asked if he were guilty or not guilty. If he said guilty the punishment followed. These were also chosen by the children, consisting mainly of taking away privileges. If he said not guilty, the judge asked for witnesses. A lively discussion usually followed. The jury, which consisted of the remainder of the class, passed judgment on the defendant. The court's record was kept on the Citizenship Chart. Each child had a card. If he were found guilty of an offense, his card was punched.

This system has given the children an understanding of why we have laws and why they should be obeyed. It is constantly stressed during the day that we should not disturb other people. We are always striving toward better citizenship in our community.

The Health Inspector gives her report at the end of each day. She watches to see that the children keep good posture and keep things out of their mouths.

The City Manager asks for announcements.

The officers of the Health Department then put the city in order.

XVII. Handwriting.

A handwriting drill was given once a week, although our slogan was "Every lesson is a writing lesson."

A Typical Lesson

A count of 5 was given for each stroke.

H. In presenting the H the teacher told the following story: This part of the H has a loop and slants down. ℋ

Now you can see it doesn't look strong. Add a strong beam and tie a knot, and you will have a perfect H that couldn't be wrong.

house house house

Houses are here and there,
Houses are everywhere.

After the lesson the children evaluated their papers on the handwriting chart. It was made in the shape of a ladder with openings so that the papers could be slipped on the rungs.

On the rungs of the ladder the following words were printed:

Perfect paper.
Endings.
Spacing.
Alignment.
Slant.

Fig. 64.—*While studying their own community, children discover that insects live in "communities" also.*

Form of letters.
Good posture.
Each one tried to reach the top of the ladder.

CONSUMERS' ENTERPRISES

I. Related reading.

Each child had a copy of COMMUNITIES OF MEN by Rugg and Krueger. It was the basic text for the unit. The children read it to solve problems and to acquire information. A large variety of books were also on the shelves for the children to choose. These are listed under "Books for Children."

A chart on the board was an aid to the teacher in finding out the types and number of books read.

[A scene of homes
was painted here.]

Our Communities

1. Plans
2. Food
3. Water
4. Protection
5. Industries
6. Schools
7. Recreation
8. Communication
9. Transportation

Pockets made like houses were placed after each large topic on the chart. When he found out something about one of these the child would fill out a blank.

Title
Author
Page
Name

Fig. 65.—*A termite community at work. Duncan-Rodgers Termite Nest, devised by Carl D. Duncan and Tom L. Rodgers, San Jose State College.*

He would then put it into the pocket after the topic that he had read.

II. ENJOYING STORIES READ BY THE TEACHER.

- "Diggers and Builders."
- "The Groceryman," HERE AND NOW STORY BOOK by Lucy Mitchell.
- THE STORY OF THE TELEPHONE by Susan Meriwether.

III. ENJOYING PICTURES ON THE BULLETIN BOARD AND AROUND THE ROOM.

The pictures were changed from time to time to correlate with their excursions.

IV. ENJOYING POEMS READ BY THE TEACHER.

- SINGING YOUTH by Mabel Mountsier.
  - "Romance of the City," page 30.
  - "Song of the City," page 169.
  - "Streets," page 144.
  - "Water," page 35.
- THE GOLDEN FLUTE by Alice Hubbard and Adeline Bobbitt.
- TAXIS AND TOADSTOOLS by Rachel Field.
  - "Taxis," page 21.
  - "Theater," page 23.
  - "Skyscrapers," page 28.
  - "Florist Shop," page 33.
  - "General Store," page 34.
  - "At the Bank," page 38.
  - "Cobblers," page 40.
  - "Houses," page 123.
  - "The Old Schoolhouse," page 124.
- TOLD UNDER THE BLUE UMBRELLA, Association for Childhood Education
  - "A City Street."
- I GO A-TRAVELING by James S. Tippet.
  - "Taxicab," page 9.

"New Automobiles," page 13.
"Green Bus," page 16.
"Trucks," page 18.
"Street Cars," page 20.
"Trains," page 46.
"My Airplane," page 54.

V. ENJOYING STORIES READ BY THE CLASS.

VI. ENJOYING STORIES AND VERSE READ BY THE CHILDREN.

VII. ENJOYING PICTURES PAINTED BY THE CHILDREN.

VIII. STUDYING SPELLING WORDS CHOSEN BY THE GROUP AND PLAYING GAMES WITH THEM.

- A. Typical games:
  1. Detective looking for clues.

A sentence is given as, "The________ protects the community." Another child gives the missing word and spells it.

  2. Baseball. The game was played around a field drawn on the board like a regular baseball diamond. Children write words on the bases. Three mispelled words puts their team out and the other side is up.
  3. Two houses are drawn on the board. They are burning. Two teams like the fire brigades of olden days are running to put the fire out. The teacher gives the word. They race to write it correctly on the board. The side with the most correct words puts out his fire.

IX. ARITHMETIC.

The children keep daily progress charts. Games are related to the unit.

- A. Storekeeper.
- B. Speed tests: played as policemen says "Go" and "Stop."
- C. Learning to read large numbers: population of the city, etc.
- D. Roman numerals: looking for them on old buildings around the city.

- E. Races: flash cards.
- F. Measuring: making city plans.

X. Music.

- A. MAGIC OF SONG by Thaddeus P. Giddings.
    - "Song of the City."
    - "The Peddler Man"

  SONGS OF HAPPINESS by Carolyn S. Bailey and Mary B. Ehrmann.
    - "The Policeman."
    - "The Fireman."
    - "The Baker."
    - "The Carpenter."
    - "The Postman."
    - "The Street Cleaner."

  FOLK AND ART SONGS, BOOK I, by M. Teresa Armitage.
    - "At the Gym."
    - "Radio."

  SONGS OF CHILDHOOD by Otis M. Carrington.
    - "The Automobile."
    - "Choo, Choo, Choo."
- B. Tonal games.
    - "I'll buy apples." (Do-so-do-so.)
    - "I'll sell crackers," etc.
    - "Help! Help! Help! Fireman save my house."
    - "Ding! Ding! Dong! I will save your House."
    - "Fireman, save my house!" (Do-re-mi-fa-so.)
    - "Yes! I will save your house." (So-fa-mi-re-do.)
    - "Honk! Honk! Honk!" (Do-mi-so.)
    - "May I cross the street?" (So-fa-mi-re-do.)
    - "Stop! Stop! Stop!"
    - "The light has turned to red."
    - "Morning papers." (Do-mi-mi-do.)
    - "I'll buy papers." (Do-mi-mi-do.)
- C. Incidental staff and notation work.
- D. Creative music.

XI. NATURE STUDY, COMMUNITY LIFE OF INSECTS.

A. Materials.
  1. Film strip, "Yellow Jackets," from the collection NATURE STUDY ILLUSTRATED, by Gayle Pickwell at San Jose State College.
  2. Yellow jacket's nest cut open to show interior structure.
  3. Termite colony in artificial nest.

B. Method.
  1. The children were told that some insects had communities similar to those of men.
  2. They were asked if they knew about any of these.
  3. Film strip was shown. One girl had given yellow jackets as one of social insects. Nearly all the class knew what they were, so that furnished a starting point.
  4. Nest was shown. During the film strip certain things about the nest were explained. We looked for those features in the nest.
  5. Termite colony. The workers and soldier termites were pointed out. It was explained that the Queen termite lives underground and is very hard to find, so she was not in this group.

C. Comparison between termite colony and human community.

Like:
  1. Definitely protected by policemen (called "soldiers" in termites).
  2. Workers who get food for colony.
  3. Nurses who take care of young.

Unlike:
  1. One nest (men have separate houses).
  2. One Queen, who lays all the eggs.

Termites (Note: Termites are *not* ants!)

The termites used in this lesson were Western termites (*Reteceililermes hesperus*). They are the most common and also the most destructive termites. The workers are white. They are about

¼ inch long. As the colony never works where light is they are blind.

The soldiers are slightly larger than the workers. They have large heads which are nearly half their length.

In the spring from February to June the winged male and female termites may appear. Often they are seen in this form. They are not winged ants, but termites. Should a queen find a rotted piece of wood, she would establish a new colony.

The termite nest pictured was devised by Carl D. Duncan and Tom L. Rodgers at the San Jose State College. It consists of a piece of rotted wood with glass clamped on either side. This is put in a pan of damp sand. The termite colony must have moisture. This can be supplied by keeping the sand damp. A cover of heavy paper should be made to slip over the wood and glass to keep the light away from the colony.

Termites can be found in old damp, rotted wood. These in the picture were found near a creek in a deep, shaded canyon. They were in an old, rotted oak limb. The limb was chopped apart and the termites shaken into a jar. When back in the classroom they were put in the nest through the opening in the wood, and covered with the paper cover.

1. THE WHITE ANTS by C. D. Marlett. Government Publication Circular 50, 1908. This gives simple, accurate information about the eastern termite.
2. INSECTS OF WESTERN NORTH AMERICA by E. O. Essig. This is a standard reference on all insects of this region. It has valuable information about termites and is easier to secure from a library than the circular.

Bees and ants are interesting to study in this connection. There is a wealth of material on the social life of the ants.

XII. Remedial reading.

At the beginning of the semester Form W of the Stanford Reading Test was given. After the tests had been tabulated, all children who were below their grade level according to the test were given remedial reading instruction. They needed definite practice in word and paragraph meaning and assistance in attacking new words. Each child was given individual attention. NEW TRAILS IN READING, the Webster Readers, and THE WORK AND TEST BOOK were used in addition to special phrase and sentence material prepared for the very slowest readers.

At the end of the semester Form Y of the Stanford Test was given. The results showed that definite progress had been made by each child. Some had improved enough to reach their grade level.

These children also participated with the others in their related reading, audience reading and reading for pleasure.

PROBLEM-SOLVING ENTERPRISES

A. How is a city planned?
B. How does our city get its food?
C. How does our city get its water?
D. How are we protected?
E. What types of work do the people follow in San Jose?
F. What types of schools have we?
G. How does the city provide for the recreation of its people?
H. What types of communication have we?
I. What types of transportation have we?

The above problems were solved partly by reading, but mainly by the excursions that were taken. The excursions are listed in the first part of this account. The reading material can be found in the bibliography.

SPECIFIC LEARNING ENTERPRISES

These are listed under "Outcomes" at the end of Section I.

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8 · European Architecture*

SECTION I. NARRATIVE ACCOUNT

LAUNCHING THE UNIT

During the first week of the new term, the children browsed through storybooks of Europe such as the TWINS SERIES, WISP, A GIRL OF DUBLIN, MADE IN FRANCE, TONO ANTONIO, CHILDREN OF OTHER LANDS, OUR LITTLE SPANISH COUSIN, etc.†

There were posters about the room of European countries, picture maps made by children of another class, a model of the Alhambra, articles from European countries brought in by both the children and their teacher and dolls of these countries.

Certain times were set aside for audience reading of interesting paragraphs or pages about life in European countries. At other times socialized discussions were held when points were brought up about life in Europe, characteristics of the people in the various parts of the continent, the games, amusements, the homes and customs.

The teacher had already planned a unit on architecture and had wondered just how to present it so as to interest everyone.

During one of the discussions, Walter, whose father was born in Greece, brought in a picture of his grandfather, who had been a member of the royal guard in Athens. It was discovered by other members that his costume, the national costume of Greece, consisting of the fustanella, a knee-length linen kilt, short sleeveless jacket, white shirt, red cap and shoes adorned with large woollen balls, was identical to that of a doll that had been brought from Greece which they had in their room. He told them that his grandfather often told him stories about when he was a young man in Greece. One of the most interesting stories to him was that of certain men who spent their lives living on pinnacles. During the discussion which followed, the word pinnacles led to pillars, pillars led to buildings, and before long the architecture unit was launched, and they had all decided to become architects and to read about the famous buildings of Europe.

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* A unit developed by Lydia E. Codone with high-fifth and low-sixth-grade children.

† See bibliography.

Several titles were suggested for the unit. A vote was taken. The majority were in favor of European Architecture.

CHILDRENS' SUGGESTIONS FOR ACTIVITIES

There was a group of 14 in the room that had developed a unit on Life in Ancient Greece. Of course, this group had already acquired an architectural vocabulary so far as Greece in the days of old was concerned. They were quite eager to demonstrate to the newer members of the class just how much they knew. Such terms as Corinthian, Ionic, Doric, amphitheater, Parthenon, Acropolis, Theseum, etc., soon brought forth the remark, "Did all the other people in other parts of Europe have those, too?"

One child suggested that they begin reading in order to solve this problem. This was an opening to get from the children suggestions as to what they wanted to do during the unit. These are listed just as they were given to the teacher as she wrote them on the board.

Read books.
Look at pictures.
Draw plans.
Find out what kinds of architecture there are.
Divide the class into groups.
Give each group a certain kind of architecture.
Let's build something.
Decide where to put what we build.
We'll have to decide how large it will have to be and what to use.
Let's take some trips.
Do some soap carving.
Make peepshows.
Have a puppet show.

Write stories.
Put on a play.
Make small architecture.
Make small statues.
Make up dances.
Make up our own songs.
Draw pictures.

These suggestions with the tentative list already made out by the teacher formed the basis for the activities carried on during the unit.

THE TEACHERS' TENTATIVE LIST OF ACTIVITIES TO BE CARRIED OUT

Dramatizing stories related to types of architecture.

Giving reports.

Building a vocabulary.

Using dictionary, encyclopedia, reference books, etc.

Writing reviews of different books used.

Reading biographies of some of the outstanding people who contributed to the building of famous European buildings.

Studying literature of the people of different periods.

Keeping individual record books of the study of architecture.

Making of book ends, tile, wall plaques, using architectural designs.

Lettering and printing for labels, designs.

Creating designs for notebook, vocabulary-book and spelling-book covers.

Making sketches of buildings visited.

Making booklets.

Designing, cutting, printing linoleum and rubber block prints.

Making transparent Gothic window designs.

Making blueprints.

Making a keystone.

Making models of the Parthenon, Pantheon and other typical famous buildings.

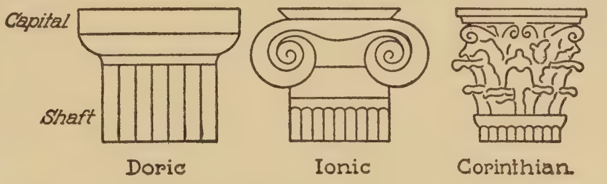
Writing make-believe stories of each period.

Creating original poems of each period.

AN EXCURSION FOR REAL EXPERIENCING

Definite plans were made for this excursion to find the application of the three types of Greek pillars to public buildings in the community.

The group with the Greek background led the discussion. The types of pillars were drawn on the board by a committee and their characteristics listed. Then the children prepared booklets containing diagrams of the pillars with the characteristics of each. This made it possible for each child to keep his own record of his findings.



Capitals of the Three Greek Orders

I. The Doric order.
  A. Simple and sturdy.
  B. No ornaments.
  C. Shaft has no base.
  D. Plain, simply-fluted shaft.
  E. The capital.
    1. Lower part—round, cushion-shaped.
    2. Upper part—a thick square slab.

II. The Ionic order.
  A. More elaborate than the Doric.
  B. A simply-molded base.
  C. Taller and more slender shaft.
  D. Capital—spiral features, called volutes.

III. The Corinthian order.
  A. Richer details.
  B. Capital—rows of acanthus leaves.
  C. Graceful fluted shaft.
  D. Less favored by the Greeks.
  E. More detailed base.

The buildings which the class visited were about 15 minutes' walk from the school. Along the way many of the children pointed out the types of columns found on the homes. Great was the excitement when two bushes of acanthus were found in a garden.

At the first building, the Rosicrucian Press, all knelt down on the sidewalk and busily turned pages in order to write the name of the building, the types of columns and the number of columns. There was intense interest shown during the whole excursion when enough buildings were visited really to see the three Greek orders and their adaptations. Many of the children sketched the buildings, as they were all quite different. On their return they must have become building-conscious, as it was discovered that their own school at each entrance boasted Doric pillars.

During the discussion that followed, the point was brought out that modern architecture has been copied from that of long ago. The children came to the conclusion that architects have not always used the pure simple forms of the Greeks but that they have often combined several types on one building. No longer are buildings made of large stones carefully cut and fitted together by hand and further secured by metal clamps or mortar.

New words now could be entered in the vocabulary books as a result of this trip.

acanthus—a plant with foliage similar to a broadleaf thistle.
fluting—vertical grooving on the shaft of a column.
Corinthian—a Greek pillar with acanthus-leaf decorations.
column—a support for a roof.
Doric—the simplest pillar designed by the Greeks.
Ionic—a Greek pillar with spirals.
Parthenon—a Greek temple in Athens, Greece.
temple—a place for worship.

Most of these meanings were readily contributed by the children. Now and then some resorted to their dictionaries for assistance.

PROBLEMS DEVELOPING OUT OF THE EXCURSION EXPERIENCE

There was great excitement during the recalling of the happy experiences of the excursion, and showing and comparing the lists of buildings, types of pillars and sketches.

Questions arose, such as:

Are there other types of pillars besides these?
Are there other types of architecture?
Were the Greeks the first people to use pillars?
Were the Greeks the first people who built temples?
Are all the temples still standing?
Were there many temples?
Why were the temples built?
Were the homes built like the temples?
What was in the temples?
Did the Greeks have any public buildings like ours?
Did other people in Europe build temples like those of the Greeks?

The teacher did not at this time help to clarify the questions but left them for future solving.

READING TO SOLVE PROBLEMS

However, the one question, "Are there other types of architecture?" served as a motivation for some research reading right then. Attention was called to a number of books on architecture which had been collected from all available sources, also THE WORLD BOOK, THE BOOK OF KNOWLEDGE, COMPTON'S PICTURED ENCYCLOPEDIA and LANDS AND PEOPLES.

Books and reference material were consulted and it was discovered that there were several other types of architecture. These were listed with whatever dates the children found. There were so many dates that after a general discussion it was decided to determine as nearly as possible just how long ago in round numbers each style of architecture was created. This was the result:

Egyptian	6,000 years ago
Greek	3,000
Roman	2,000
Byzantine	1,600
Romanesque	1,500
Gothic	700
Renaissance	500
Today	
Tomorrow	

There was so much interest shown in the two Sphinxes in front of the Scottish Rite Auditorium and so many questions asked that the teacher decided to include Egyptian architecture.

The class was divided into eight groups of four children each. They decided that after they had done some research reading about each type of architecture they would present their material to the rest of the class.

These were their suggestions for an outline for their reading:

Type of Architecture

I. Characteristics.
  A. Pillars, if any.
  B. Designs.
  C. Decorations.
  D. Carvings.
  E. Shape of the floor plan of the buildings.
  F. Kinds of material used.

II. Famous examples.
  A. Name.
  B. Location.

GROUP DISCUSSIONS CREATE FURTHER PROBLEMS

As the findings of the committees were completed, they were written on the board for all to see and discuss. There were more questions about each type of architecture, more new words added to vocabulary books, and there was a general request for further details about the outstanding buildings of each type. The same groups were kept; each group to be responsible for the famous examples of his type of architecture.

A simple outline was suggested by the children for each group to follow.

Famous Buildings of Europe

Name of building.
Who built it?

Fig. 66.—*Each group has made a model to represent a particular type of architecture.*

What type of architecture was it?
When was it built?
Where was it built?
Why was it built?
Is it still there?

It wasn't possible to get all this information about each building but the reports were interesting. There was an enthusiastic search made for pictures to illustrate their talks.

GROUP CONFERENCES SOLVE CONSTRUCTION DIFFICULTIES

Now that a background had been built up centered around the types of European architecture, the children were ready to go ahead with the construction of their miniature famous buildings. Votes were taken and it was decided to build a pyramid, the Parthenon, a Roman triumphal arch, the Pantheon, St. Marks, and the Cologne Cathedral. Architects must have floor plans and elevations, so more research was under way; all but the Renaissance and Today's Architecture groups taking part. They decided to work on other activities as the Renaissance was really a rebirth of Greek and Roman architecture and Today's Architecture had examples in their own community which they could visit.

It was their decision to make book ends and table tiles of tin, using architectural designs, and block prints for wall hangings.

After the best floor plan and front view of each type of building had been chosen, the construction was ready to begin.

The one whose plan had been selected was the chairman of his group. Some of the construction problems, such as the pyramid and the triumphal arch, needed only two children; the other groups kept three children.

Those who preferred not to work on these problems decided to develop three large charts: "Architecture Marches On," "Archways through the Ages," and "Types of Greek Pillars."

These construction problems extended over a period of several days. Conferences were held for evaluation. Worth-while and helpful criticisms were made by those not working on that particular problem.

James. Is that how big the pyramid will be?

BILLY. I think it's much too small. I thought it was higher than the Roman triumphal arch.

TEACHER. The committee should check up on that. Find the dimensions of the pyramid and also those of Cologne Cathedral and St. Marks. What do you think of the Byzantine church?

ELEANOR. Those cardboard domes don't look like the picture in my book. Those have sharp edges. I think they should be round.

JIMMY (*member of committee*). We didn't know how to make them rounder.

VIRGINIA. You could make clay domes and put those on top of your building.

JIMMY. I think five heavy clay domes would crush our building.

TEACHER. You might make papier-mâché shells over clay bases. I'll show you how to do that after you have your clay domes the right size. How many will you have to make?

JIMMY. One large central dome and the four little ones are all the same, so we'll have to make only one of those. Oh! We'll have to make some tiny ones too for those onion things up on top.

TEACHER. I think the cathedral builders need some help.

WAYNE. What? No stained-glass windows? It doesn't even look like a cathedral.

TEACHER. How could they make them?

VIRGINIA (*committee member*). We could make little tiny ones like those we made for an art lesson last week.

ESTHER (*another committee member*). We could float water colors, only have smaller color spots.

WAYNE. Then they could cut window frames out of black paper shaped like Gothic windows.

TEACHER. I know that anyone then couldn't help but recognize your building as a cathedral. How about the Pantheon?

WALTER. Well, it does look like the Pantheon, but it won't be white when it's finished, will it?

JOE (*committee member*). No, we're going to cover it with gray so that it will look like granite.

James. There's no round hole in the top for the light and the rain to fall through.

Joe. Oh! We forgot, but we can cut it.

Teacher. What do you think of the Parthenon?

Philip (*committee member*). The roof is all warped. Do we have to make a new one?

Mary. They could put three or four more pieces of cardboard inside like the end pieces and then connect those with long strips of cardboard to hold it up.

Teacher. Can you do that, Philip?

Philip. Oh, yes—easy! All we have to do is to loosen the gummed tape and the roof comes right off.

Ralph. The triumphal arch looks all right. It's like that picture up there.

Walter. That won't be like white marble when it's finished, either, will it?

Beverly (*committee member*). No, ours will look like granite, too.

All these suggestions and others were welcomed by the committees and the construction was speeded along. They could hardly wait for the outer finish to be put in place.

READING TO DETERMINE HOW EACH TYPE OF ARCHITECTURE CAME ABOUT

Quite often during the discussion periods, the question arose, "Why did the men about whom Walter told us live on the high pillar-like rocks?" Walter had referred to the monks who had built the Meteora Monasteries on the summits of pinnacles in Thessaly in the Middle Ages, for safety and for seclusion.

There were other questions which occurred again and again, such as, "Why didn't the Greeks have windows in their temples?" "Why were the roofs of the Gothic cathedrals so steep?" "Why were Roman and Greek roofs either flat or only slightly slanting?" "Why did these monks in Greece seek seclusion?" etc.

● Fig. 67.—*The class studies architecture of familiar buildings.*

The teacher had placed an outline on the board to guide the children's reading. She suggested to the children to center their reading around the topics listed. Then she was certain they would discover why certain sections of Europe had developed their own types of architecture.

What Determined Each Type of Architecture

Physical features of that section.
A short history of that section.
The customs of the people.
The amusements of the people.
Religious ideas of the people.

For this research reading, there were four groups formed—Egyptian, Ancient Greek, Early Roman and Cathedral Builders. When these groups gave their talks to the rest of the class, they all had a better idea as to why so many of these things had come about. Some of the group talks were later used as the introductions to their interpretations of the types of architecture when the culmination of their unit was presented. These were some of the points brought out.

In the warmer southern sections, there was no need for windows as they wanted to keep out as much of the bright sunlight as possible. In the colder northern sections of Europe the heavy snows and rains would crush flat roofs.

During the long cold winters, the northern people wanted as much light as possible in their churches; therefore, many windows.

When Christianity ruled the world, stained-glass windows with pictures of Christ taught the story to the vast numbers of people who could not read.

The customs, the amusements, and the religion of the people determined the type of architecture. The Greeks, an outdoor people, were interested in their bodies. Taking part in the Olympic Games was their goal. They had a love for simplicity and the beautiful as is shown in their temples.

As the children continued their reading and their discussions, they found out that items such as these influenced each type of architecture.

EXCURSIONS TO OUTSTANDING BUILDINGS IN THE COMMUNITY

There were some fine examples of Greek, Roman, Byzantine, Gothic and Modern architecture within walking distance of the school. Plans were made for an excursion to this group. The children, as before, made folders, several pages for each type of architecture, for the names of the buildings, items of interest for drawings, if they wished to make any.

It was interesting to see the remarkable architectural vocabulary they all had acquired by this time. There was no hesitancy about pointing out Gothic spires, Roman arches, keystones, sphinx, Greek temple roofs, Byzantine domes, Gothic windows, rose windows, buttresses, etc.

There was no need to tell them to list what they recognized. Some were down on the sidewalk like Mohammedans, busily writing; others used mail boxes, automobile fenders, telephone posts and anything else within reach.

There was an example of Egyptian architecture in the community at quite some distance, to which it was necessary to go by automobiles at another time. This was the museum of the Rosicrucians. Here there were replicas of the Rosetta Stone, of the lotus and papyrus pillars, of an underground tomb, of a cross section of a pyramid, and of one of the sarcophagi of Tutankamen.

Lantern slides were later made from films of pictures of these buildings taken by the teacher. They were shown to the children and from the discussion which followed material was collected for the last scene of the culmination.

PLANNING THE CULMINATION

A general conference was called for planning the culmination, to which they could invite their parents and friends.

Suggestions were made such as singing the songs that they had learned, presenting their impromptu dramatizations of the stories which had been read to them and drawing pictures on lantern slides of the buildings which they had visited.

It was decided to start with the earliest type of architecture. The majority was in favor of dramatizing "The Pyramid" from HOW

THEY CARRIED THE GOODS, as an interpretation of Egyptian architecture.

There were any number of suggestions for interpreting Greek architecture. One boy wanted to dramatize the story of Ulysses; a girl thought the story of Persephone the best. There were requests for other stories, including some of the myths, until someone said that so many dramatizations would be too tiresome. There would have to be more of a variety. Singing was suggested but it was discarded as being not nearly so appropriate as the interpretive dance, "Offerings to the Goddess, Athena," which the girls had created during their physical education time.

When it came time for planning the Roman scene, the boys thought that this should be theirs as the girls had monopolized the Greek scene. They were in favor of a triumphal procession through a Roman arch, but further discussion revealed that the stage would not be large enough for a Roman arch through which the conqueror could march, and for his slaves, spoils of war, victorious soldiers and chariots. There was some talk about presenting their dramatization of "The Roman Road" from HOW THEY CARRIED THE GOODS, and dramatizing Roman legends or a scene in the Forum. The scene in the Forum led to a scene in the Colosseum. This was received enthusiastically, as the boys decided they wanted to create an interpretive gladiatorial combat using the music which they had heard, in the record, "The March of the Gladiators."

For the next scene, more dramatizations were suggested: Justinian supervising the building of Saint Sophia, or the merchants of Venice bringing material for St. Marks. As architecture now was influenced by Christianity it was decided to have one scene interpret all the cathedrals instead of taking the Byzantine, Romanesque, Renaissance and Gothic eras separately.

Dramatizing "The Boy of Rheims" from THE GOLDSMITH OF FLORENCE was suggested but the majority were in favor of having a cathedral interior scene and a choir singing the songs which they had learned related to that period.

The natural thing to plan for the next scene was architecture in their own community which they decided to call, "Today in San Jose." At first it was suggested that pictures of the buildings visited be drawn on lantern slides and shown to the audience. This would prove to the audience that today's architecture uses that of long ago. Another suggestion was made that the films of the pictures that the teacher had taken on the trips be made into real slides. Of course, this met with everyone's approval for then they themselves would be flashed on the screen. However, when the teacher checked over the films, most of them could not be used as the figures sprawled over the sidewalks would no doubt distract the audiences' attention from the motive in showing these scenes. Therefore, another tour of the buildings was made by the teacher to collect pictures of buildings with pillars, domes and windows only.

BRINGING THE PAST DOWN TO THE PRESENT

The teacher reminded the children that when they were discussing their culmination, they thought that the last scene should be "Today in San Jose." She now had some lantern slides made from pictures of the buildings to show them. The children exclaimed over the pictures. Great was their surprise to see in their room pictures of something they had visited. Remarks made by the children showed that their reading and discussions had really made them building-conscious. Some of the remarks which they made were actually used for the last scene of their culmination.

Picture of a sphinx.

"That statue is a sphinx in front of the Scottish Rite Temple."

"It has the body of a lion and the head of a woman."

"On top of the headdress there is a cobra which means power."

"There's an Egyptian archway back of it."

"I know it's Egyptian because it's something like a square at the top but wider at the bottom."

Picture of Rosicrucian Press Building.

"This is Greek architecture because it looks like the Parthenon in Athens, but it's different because it has only four pillars."

"The Parthenon had eight. This roof is slightly slanting, too."

"There are four Ionic pillars across the front."

Picture of Lincoln School.

"That's our school. It has a Greek porch and Greek tops over the windows."

"The windows look like the Greek archways in the chart."

"The other part of the building has Roman arches but we can't see them."

Picture of Christian Science Church.

"It looks like the Pantheon."

"It's Roman architecture. It has a Roman dome and a Greek roof over the porch."

"But the architect put windows in this to let light enter. The Romans didn't use stained-glass windows."

Picture of Scottish Rite Temple.

"This has both Greek and Egyptian architecture."

"There are six Ionic pillars across the front."

"There's the Sphinx with the Egyptian doorway back of it that we saw in the first picture."

Picture of Hall of Records.

"That has Roman arches above the windows and the door."

"There are Corinthian pillars between the windows."

"If this were a round building it would look like the Colosseum because it has so many arches."

Picture of St. Joseph's Church.

"You can tell that's Byzantine architecture because it has one large central dome and smaller domes around it."

"You can't see here that it's built in the shape of a cross but we could when we were inside."

"I remember it had stained-glass windows with pictures of Christ on them."

Picture of St. Patrick's Church.

"You can tell that's Gothic because everything comes up to a point."

"The windows and doorways are shaped like two hands pointing to Heaven."

"The tower has little spires pointing to Heaven too."

"That had a cross-shaped floor plan, too."

Pictures of Medico-Dental Building and De Anza Hotel.

"I see the setbacks that keep the walls from going straight to the top."

"The steps on the walls are the setbacks. We have to have them so as to let light into the street, and air and sunshine."

"Those long lines look like columns between the windows."

"Those long lines make the building look taller."

"Our modern buildings are going to have more setbacks than they used to have to let more sunshine down into the street."

"And let more air into the street, too."

Committees were appointed to organize the talks for the announcers of the culmination as the slides would be shown to the audience. They were cautioned to make each talk as short as possible so as not to be boring.

Now that the plots of the scenes met with everyone's approval, a later discussion was turned to stage scenery.

These were the results of the scenery conference.

The first scene—"Building the Pyramid"—should have for a background a pyramid partly built. Slaves were to be pulling a sled loaded with blocks of stone. The folding screens at the sides which were used as side wings were to have panels with Egyptian pillars.

The dance of offerings to the goddess should take place on the Acropolis by the Parthenon. The panels on the screens should have Doric pillars.

The gladiatorial combat should take place by the Colosseum. Doric pillars could still be left on the screens for the Romans used and copied the architecture of the Greeks.

For the cathedral scene the stage should be in darkness, with light coming from a transparent Gothic window. The chorus could be dressed in choir robes, holding silver books.

Committees were appointed to prepare the stage scenes, costumes and properties.

Pictures were consulted for suitable background scenes and for costumes. From time to time the class was brought together for the purpose of showing how much had been accomplished and of judging the results.

When the costumes were finished and the scenery was in place, the culmination was presented to the other grades in the school and to the parents and classes of students from the Teachers' College.

OUTLINE FOR CULMINATION

Prologue: Architecture Marches On.

Scene I. Egyptian Architecture: The Pyramid.

Dramatization, "The Building of a Pyramid." Adapted from HOW THEY CARRIED THE GOODS.

Scene II. Greek Architecture: The Greek Temple.

Original dance, presenting offerings to the goddess, Athena.

Scene III. Roman Architecture: The Colosseum.

Original dance, Roman shield dance.

Scene IV. The Cathedral Builders and Cathedrals.

Songs: "The Vesper Hour, "The Bells of St. Mary's." Children in choir robes. Lighted stained-glass window.

Scene V. Today in San Jose.

Lantern slides

1. Sphinx (Egyptian).
2. Rosicrucian Press (Grecian).
3. Christian Science Church (Roman).
4. Scottish Rite Temple (Greek pillars).
5. Hall of Records (Roman arches).
6. St. Joseph's Church (Byzantine).
7. Lincoln School (Greek and Roman).
8. St. Patrick's Church (Gothic).
9. De Anza Hotel (Modern).
10. Medico-dental Building (Modern).

THE CULMINATION—ARCHITECTURE MARCHES ON

Prologue

(The announcer was dressed in ordinary school clothes)

The high fifth-low sixth grades have just finished a unit of work which we called European Architecture. By architecture we mean the style of a build-

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● FIG. 68.—*An Egyptian ruler orders the building of his pyramid.*

ing. We have read and talked about the famous public buildings of Europe. We found out that as the years went by, different kinds of architecture were produced by the peoples of Europe. We have decided to give you our interpretation of architecture this morning by means of a dramatization, rhythmic dancing, singing and lantern slides. The types we have selected are the Egyptian, the Greek, the Roman, the Gothic and Today-in-San Jose.

In order that you may see how the scenery is changed we will open the curtains between scenes.

A boy in Egyptian costume appeared on the stage. He made this announcement:

ARCHITECTURE MARCHES ON!

Then he read the following story.

The architecture of the ancient Egyptians was the result of their religious beliefs. They built beautiful temples in which they could worship their gods.

These temples were noted for their huge bell-shaped and lotus-bud columns. The ancient Egyptians believed in many gods. They thought animals—the cat, crocodile, and lion—were sacred. The god of the sun and of the River Nile were their favorites.

They believed that when a man died his spirit left his body and would live again. If the body were destroyed, the spirit would wander over the earth with no place to go.

That is why the Egyptian kings spent so much time and money building a place for their bodies after death. They built huge pyramids made of stone. These tombs were filled with such things as food, clothing, furniture and jewelry for the spirit to use. On the walls of the tomb and on the stone coffin was written the story of the king's life in the form of picture writing which we call hieroglyphics.

There are 67 of these pyramid tombs made of huge blocks of stone in Egypt.

The largest one is near Gizeh. It covers 13 acres of ground. The floor plan is a square. It is 481 feet high. More than 2 million blocks of stone were used. Each stone weighed more than 2 tons.

In the first scene you will see how Zoser, an Egyptian king, had his pyramid built, 6,000 years ago.

Then followed the dramatization, "King Zoser and His Pyramid."

King Zoser and His Pyramid

Characters:

King Zoser.
Court Magician.
Royal Architects: Imhotep, Khnumu.
Royal Messenger.
Two Slaves.

King Zoser. There is my tomb. See the men are working on it. No one has ever made a mountain in the desert before. It grows higher and higher, and in it, when I die, I shall lie forever and ever.

Court Magician. Who is planning this mountain of stone, O King?

King Zoser. My royal architect, Imhotep, and his nephew, Khnumu, have worked on the plans for a long time. I was astonished at their plans.

Court Magician. What is the cause of this astonishment?

King Zoser. They are planning five tombs, one on top of another, to a height of 190 feet.

Court Magician. O, King Zoser, there are two men near your tomb now. Is one of them your royal architect?

King Zoser. I must have a talk with him and see how the work is progressing. The tomb must be finished before I die.

(*King claps hands.*)
(*Royal messenger enters.*)

King Zoser. Send me my royal architect at once!

(*Messenger bows out.*)
(*Architects enter.*)

King Zoser. My Royal Architect! How nearly finished is my pyramid?

Imhotep. I need six months more. If the tomb is not finished then, may I have a little more time?

King Zoser. No. You promised to finish it by the end of this year, or off will come your heads!

Imhotep. Have I ever failed thee, O King!

King Zoser. No.

Imhotep. Then have confidence in me.

King Zoser. Then go!

(*Architects go out bowing to king.*)

Magician. Ha! Ha! What those two think is not possible.

King Zoser. What is not possible?

Magician. They'll never be able to finish your pyramid before the year is over.

King Zoser. But they have given me their promise!

Magician. It will take one hundred thousand men twenty years to pile so many blocks of stone so high!

(*Enter architects very excitedly.*)

King Zoser. What is this disturbance?

Architects. O King—your pyramid will be finished on time.

King Zoser. What is this? Just a short time ago you wanted more time.

Imhotep. We have found a new and faster way to drag the blocks of stone from the quarries to the pyramid.

Khnumu. We have found a way to push and pull the sleds with their blocks of stone over rolling logs.

Magician. There are not enough logs in all of Egypt to build a road of logs from the quarries to the pyramid.

Imhotep. But we won't have a road of logs. We need only a few.

Khnumu. The slaves pick up the logs that are left behind and carry them around in front. Then the sled rolls over the logs and in this way the blocks of stone are carried to the pyramid.

● Fig. 69.—*Greek dancers add to the beauty of their temple.*

KING ZOSER. Fine! My royal tomb will be finished. I see now that it will be the largest one in all Egypt and that it will be large enough to hold me and all my possessions.

A girl in Greek costume announced:

ARCHITECTURE MARCHES ON!

and read this story.

The greatest architecture of all the ages was developed in Ancient Greece. There have been no buildings as beautiful as the Greek temples which were built three thousand years ago.

Many temples were built in honor of their gods and goddesses. They had slanting roofs and beautiful columns. The columns were built of blocks of marble, carefully cut and placed one on top of another.

The Greeks developed three kinds of columns. The Doric was the simplest of all. It had no base. It rested on the floor. It had no decorations—only grooves. It represented the young men of Greece.

The Ionic column was lighter and more graceful. This column had a base. The top had coils. This represented the young women of Greece.

The Corinthian was more slender. It had decorations of the acanthus leaf and buds carved out of marble.

The most beautiful of all the Greek buildings was built on the Acropolis. It was the Parthenon, built in honor of the Greek goddess, Athena, the Goddess of Wisdom. The whole building was built of marble. It had 58 Doric columns around the outside.

In the next scene you will see some Greek maidens dance for the goddess Athena, for whom Athens was named.

(Then followed the original interpretive dance presenting offerings to the goddess.)

ARCHITECTURE MARCHES ON!

Roman Architecture

(By an announcer in Roman armor who read this story)

In architecture, the Romans borrowed many things from the Greeks. They are responsible for the Roman arch which helped to change the appearance and construction of buildings. It is made of wedge-shaped stones with

● FIG. 70.—*A gladiatorial combat in the Colosseum.*

a keystone in the center. Their builders now could do away with flat heavy stones over windows and doors. They could now use many small stones to make a graceful round arch. They could now build much wider windows, doors, and roofs.

The Romans used the arch for bridges and acqueducts. Before their day, there were few bridges, and they were built of wooden beams. The Romans succeeded in building graceful stone bridges by the use of the arch.

The Colosseum furnished the chief amusements for the Roman people. Wild animals were turned loose and allowed to kill each other for the amusement of the Roman people. Sometimes slaves and prisoners were placed in the arena to fight for their lives. Sometimes gladiators were given swords and made to fight and kill each other. When a gladiator fell, the conquering gladiator waited for the crowd to tell him what to do. If the crowd held thumbs up, he was allowed to live. If they gave thumbs down, he was put to death.

The Colosseum, built 2,000 years ago, where these fights were held, still stands today, although it is in ruins.

In the next scene you will see the march of the gladiators in the Colosseum as they were in the days of old.

(Then followed the original Roman shield dance by six boys.)

ARCHITECTURE MARCHES ON!

The Cathedral Builders

(By an announcer dressed in a choir robe who read this story)

As the years went by, and the people of Europe became more civilized, their religion changed, Christianity now ruled the world. Now the people became cathedral builders.

Their cathedrals were built in the shape of a cross because the cross was the sign of the Christian religion.

A new style of building was used now, called Gothic. Gothic buildings have narrow pointed arches, instead of the Roman round arches. The buildings were much higher, too, with slender columns and tall spires pointing to the skies. These tall spires try to reach up into the skies and be nearer God. The many windows were made of stained glass of rich colors which no modern glass workers have been able to copy. It took more than

● FIG. 71.—*A vested choir beneath Gothic spires.*

200 years to build some of these churches. People today travel thousands of miles to see these Gothic cathedrals which were being built 700 years ago.

The inside of the cathedral was decorated with paintings and pictures of the life of Christ. Lighted candles were used on the altars. Organs and bells were placed there also. Hymns were written to be sung as part of the worship.

In the next scene you will hear songs such as were sung in the cathedrals of long ago.

(Then followed two songs, "The Vesper Hour" and "The Bells of St. Mary's." During the latter, chimes were rung.)

ARCHITECTURE MARCHES ON!

Today in San Jose

(By the same announcer as the *Prologue*)

Our own city has copied the architecture of the countries of Europe. We will now show you pictures of some of the public buildings of San Jose which we visited on the different trips that we took.

1. This is a sphinx in front of the Scottish Rite Temple on North Third street. This statue has the body of a lion and the head of a woman. It has been copied from a sphinx which was sculptured in Egypt 6,000 years ago. Back of the sphinx is an Egyptian archway.

2. The Rosicrucian Press on Notre Dame Avenue which has been copied from Greek architecture. It has four Ionic pillars across the front. It is like the Parthenon which was built in Greece 3,000 years ago.

3. The Christian Science Church on St. James Street. It has been copied from Roman architecture. It has a dome like the Pantheon, one of the famous buildings of early Rome.

4. The Scottish Rite Temple on North Third Street. The pillars on the porch are also Ionic pillars. This has been copied from Greek architecture.

5. The Hall of Records on North Market Street. Here you see many Roman arches. They all show the keystone in the center with wedge-shaped stones on each side.

6. St. Joseph's Church on South Market Street. This has been copied from Byzantine architecture. It has a large center dome with smaller domes around it. It is built in the shape of a cross.

7. Here you see Lincoln School. It is an example of architecture in San Jose 61 years ago. It has Greek Doric columns on the porch. There is a Greek roof over the porch. There are slanting Greek roofs over the windows also.

8. St. Patricks Church on East Santa Clara Street. This is Gothic architecture. You can tell it's Gothic because everything comes up to a point. Over the doorway there are three rose windows. These are made of stained glass.

9. Medico-Dental Building. Our modern buildings have setbacks to let more sunshine get down to the streets and more air too. Between the rows of windows there are long lines and grooves to make the building look taller.

10. The De Anza Hotel on West Santa Clara Street. This has setbacks too. It looks something like the Medico-Dental Building. This is another example of today's architecture."

SOME OF THE SPECIFIC OUTCOMES

I. Knowledge of:
  A. Certain geographical features of Europe.
    1. Location of Europe in relation to California.
    2. Some idea of the distance between Europe and California.
    3. An idea of the comparative size of Europe.
    4. Some idea of the physical features of Europe.
  B. Conditions influencing the different types of architecture.
    1. Religion during the different periods.
    2. Amusements during the different periods.
    3. Laws during the different periods.
    4. Customs during the different periods.
    5. Education during the different periods.
    6. Travel during the different periods.
  C. Arithmetic activities.
    1. Units of measure—yard, foot, inch, half-inch, quarter-inch.
    2. Use of ruler.
    3. Measuring by foot ruler and yardstick.
    4. Reducing to scale.
    5. Measuring by comparing one thing with another to get proper relationships (buildings).
    6. Building plans—reading, drawing.
    7. Façades—reading, drawing.
  D. Related English activities.
    1. Writing stories.
    2. Planning and giving oral reports.
    3. Listing important facts.
    4. Needed mechanics in writing (capitals, sentence, paragraph, etc.).

        5. Planning a program.
        6. Writing invitations.
    E. Reading activities.
        1. Dramatizing stories.
        2. Word study.
        3. Use of a book—table of contents, index, title page, arrangements of covers, etc.
        4. Audience reading.
        5. Research reading.
        6. Remedial reading.
    F. Spelling.
        1. Common words misspelled in children's stories.
        2. Common words asked for by the children.
        3. Architectural terms needed.
    G. Music.
        1. Songs.
        2. Instrumental.
    H. Art activities.
        1. Elements of design.
            a. Egyptian.
            b. Greek.
            c. Roman.
            d. Gothic.
        2. Harmonious color schemes.
        3. Arrangements of charts and booklet covers.
            a. Spacing.
            b. Lettering.
        4. Block printing.
        5. Spatter painting.
        6. Arts and crafts.
        7. Illustrations.
        8. Stage scenery.

II. HABITS.
    A. Greater freedom and ease in giving reports and other oral expression.
    B. Greater skill in dramatization.
    C. Greater ability to express themselves in the writing of verse and stories.
    D. Greater ability to plan programs.

E. Greater ability to judge work.
F. Better working habits.
G. Ability to play together more harmoniously.
H. Ability to adapt knowledge gained to new situations.
I. Greater initiative on the part of the children.
J. Greater ability to think for themselves.
K. Greater ability to solve childrens' problems.
L. Greater ability to think and talk to the point during discussion.
M. Greater ability to collect and organize subject matter.
N. Better cooperation.
O. Greater ease in reading and drawing maps.
P. Greater ease in locating places on a map.
Q. Greater skill in handling tools.
R. Greater skill in cutting patterns.
S. Greater skill in sewing.
T. Greater skill in lettering.
U. Greater skill in the use of a ruler.
V. Greater skill in the drawing of building plans.
W. Improvement in the use of mechanics in language and reading.
X. Greater freedom and ease in giving oral reports and other oral expression.
Y. Greater skill in dramatization.
Z. Improvement in spelling.
AA. Improvement in singing songs.
BB. Greater neatness and accuracy in the making of charts, booklets, written work, etc.

III. ATTITUDES.

A. An appreciation of the foundation that the past has laid for the present.
B. Through the increased knowledge of the problems of other people, an attitude of sympathy and tolerance toward world institutions and beliefs.
C. The understanding that peoples' lives and customs are affected by their geographic position, the location of natural resources and climate.
D. An appreciation of the fact that religion was important in shaping the characters and ideals of early peoples.
E. An appreciation of the fact that the ideals of early peoples in art and architecture are still valued today.

F. An appreciation of how nations can adopt and adapt the ways and customs of other countries.
G. A greater sympathy for the problems of other countries.
H. An interest in sharing experiences.
I. Willingness to help others.
J. Greater appreciation of good work.
K. Happy working atmosphere.
L. Greater appreciation of the principles of architecture applied to their own homes and buildings.
M. Greater consideration for others while going on excursions.
N. A finer appreciation of books and magazines as very important sources of information.

SECTION II. INTEGRATED SUBJECT MATTER AND METHODS

PRODUCERS ENTERPRISES

I. MAKING MINIATURE FAMOUS BUILDINGS.
  A. Materials needed.
    1. Cardboard boxes, various sizes.
    2. Gummed tape.
    3. Calcimine.
    4. Paste.
    5. Paper toweling.
    6. Salt and flour.
    7. Glue.
  B. Egyptian pyramid.

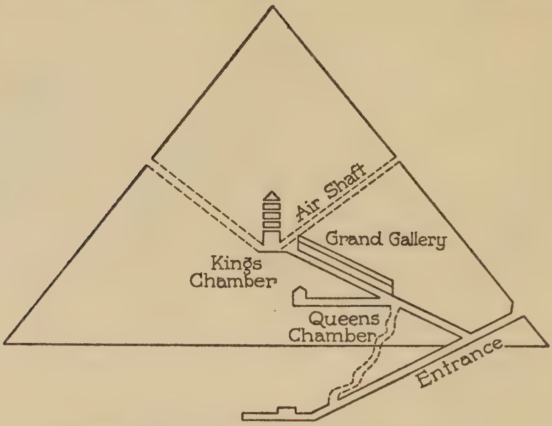
The four triangular sides were fastened to a square with gummed paper. Two sides at a time were brought up and fastened together, then all were fastened to each other.

The outside covering was added: Two parts flour, one part salt and enough water added to spread easily. A little black calcimine made the mixture look like granite.

The shapes of the blocks of stone were marked off with a pointed stick.

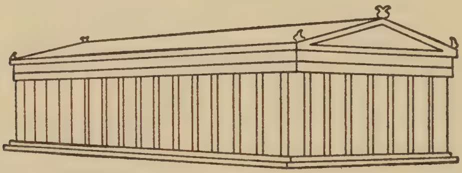
● FIG. 72.—*These builders reconstruct the Parthenon.*

A vertical section was made showing entrance and rooms.



VERTICAL SECTION OF A PYRAMID
FIG. 73.

C. The Parthenon.



The Parthenon
FIG. 74.

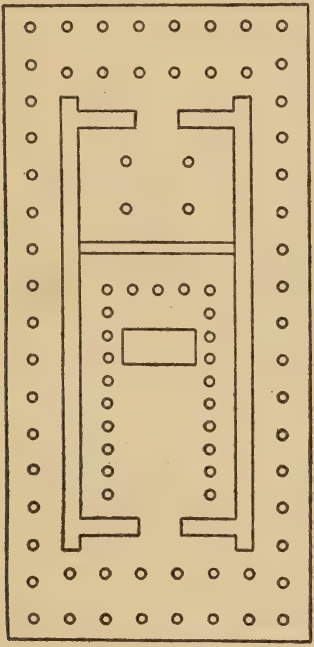
Two large pieces of very heavy cardboard were cut for the floor and the base for the roof. The places for pillars were marked off on each. A large box was glued in the center of the base, leaving room for two rows of pillars at the ends and one row on each side.

The base for the roof was glued to the box with the pointed pediments fastened to each end with gummed paper.

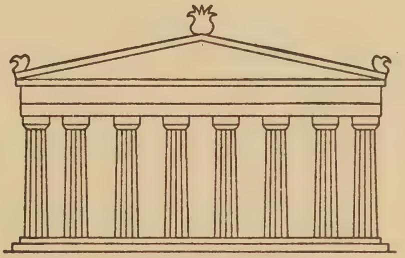
Three similar pediments were fastened at short distances to hold the ridgepoles (two strips of cardboard 1 inch wide). To these were fastened the sloping sides of the roof. The relief figures on the pediments and on the roof were cut of chip board and glued in place.

The pillars were made of white drawing paper rolled and pasted so as to make cylinders. Before the pillars were put in place the whole building was covered with the salt and flour mixture, left white so as to resemble marble.

Then the pillars were put in place, and as the mixture hardened, the pillars were held firm.



Floor Plan
THE PARTHENON
Greek Architecture
FIG. 75.



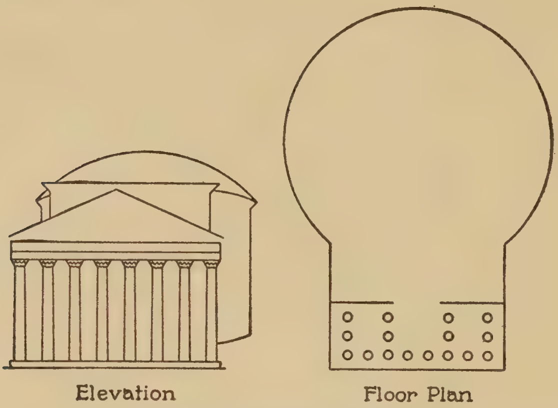
The Parthenon
FIG. 76.

D. The Pantheon.

A small square box was cut to form the Greek temple roof and porch for the pillars. To this another box was glued which was to be the foundation for the circular part of the building.

A long sheet of chip board was cut. It was fastened to one side of the porch, rolled around the box and brought to the other end.

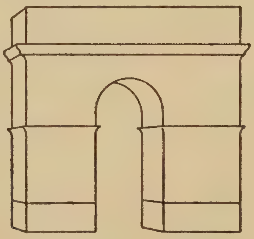
A dishpan was used for the dome. It was too small for the circular building so it was built out with clay. A papier-mâché shell was made by pasting several layers of triangular pieces of paper toweling over the form. This dried overnight. It was fastened to the circular wall with gummed tape.



THE PANTHEON-ROME
Roman Architecture
FIG. 77.

Pillars similar to those of the Parthenon were made, painted gray and put in place after the grayed "granite" salt-and-flour mixture had been laid on.

E. The Triumphal Arch.



TRIUMPHAL ARCH
Roman Architecture
FIG. 78.

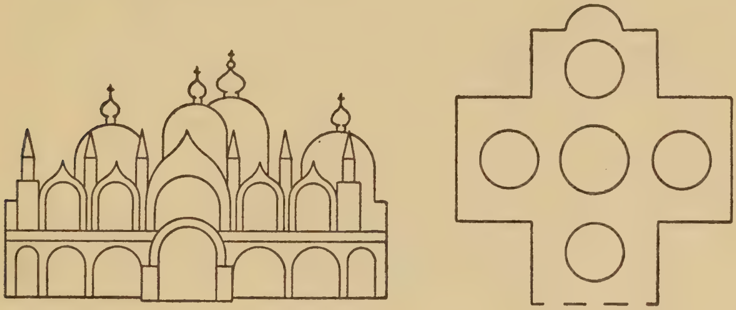
The triumphal arch was made by standing two open shoe boxes on end, and a third glued in place over them.

The arches were cut of small pieces of cardboard and fitted into the intervening spaces with gummed tape.

The open spaces were covered with chip board. Over all was put more of the grayed "granite" finish.

Inscriptions were marked with a pointed stick before the mixture hardened.

F. Saint Mark's.



Elevation Floor Plan

SAINT MARKS - VENICE
Byzantine Architecture

Fig. 79.

One fairly large square box was used for the central section. The extra pieces to make the cross-shaped building were cut from shoe boxes. These were fastened to the center box with gummed tape.

The semicircular apse was made similar to the circular part of the Pantheon.

Circles were measured off on the tops of the boxes to determine the size of the domes, the central dome being the largest.

The center mold was made by filling a flower bowl, which happened to be the correct size, with clay. The bowl had been oiled first so that the clay could be slipped out. The clay mold was turned over. On this were placed alternate layers of paper toweling strips and paste. This shell had to be trimmed at the edges so that it would lie flat.

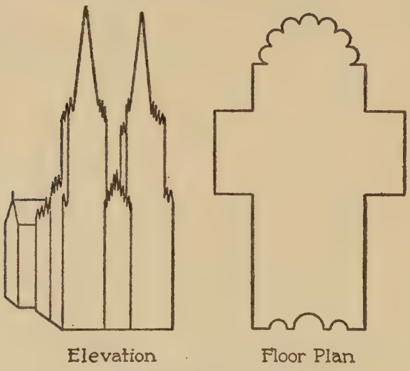
The same procedure was used for the four smaller domes.

Each of the numerous small towers or minarets was made by fastening four tall triangular pieces of chip board with gummed tape.

Over the doorway were put the four horses.

The building was covered with a yellowed marble finish of salt and flour.

G. The Cologne Cathedral.



COLOGNE CATHEDRAL
Gothic Architecture
FIG. 80.

Various shoe boxes of different sizes were used here.

The central section was a strong cardboard box. To the front of this was glued a large shoe box standing on end. The two tall four-sided towers were fastened to the top of this box. These were made by fastening together four tall triangular pieces of chip board with gummed tape.

The apse was made in a similar fashion to that of the Byzantine building.

Gothic-shaped openings were cut so that the "stained-glass" windows could be glued underneath.

The roof was put in place in a similar fashion to that of the Parthenon but with a much steeper slope.

The roofs over the transepts were fitted to the long axes of the building with similar sloping sides.

II. MAKING STAGE SCENERY FOR THE CULMINATION.

A. Backgrounds.

It was necessary to make 3 backgrounds 6½ yards long and 3 yards wide for the stage. For this, 3 strips of No. 50 wrapping paper—6½ yards long—were cut and fastened together with "adheso" to make the proper width. When it was thumbtacked to the wall, an outline picture was flashed on this background, by means of a projection lantern. It so happened that these three backgrounds which the children elected to do, called for a great deal of perspective, but they had had practically no experience with perspective.

It was part of their research work to find buildings of a suitable size which they could trace on etched glass with pencil.

By experimenting with the position of the lantern as they focused the slide they could tell just how large to have the featured building on their background. They could also get some idea of how the finished product would appear to the audience.

The stage committee traced the outlined building with chalk, and colored it with various shades of chalk. It was found that if a base of white chalk were rubbed into the paper first the colors in the finished scene would be more subdued and more easily shaded. As the colored chalk was placed on the paper it also was rubbed and softened. The backgrounds were kept very inconspicuous, as the buildings were to be featured.

Putting the three backgrounds in place on the day of the culmination presented a real problem. Paper backgrounds 6½ yards long and 3 yards wide could not be easily handled without tearing nor without noise.

It was decided to tack them in advance on the rear wall of the stage, along the upper edge only, then to unroll them as needed. Of course, the first one—the Egyptian scene—was to be in place. The third and last scene, when rolled to the top as tightly and as high as possible, was hung in slings—strips of cloth. The second scene was rolled so that it just touched the third scene. It took the stage crew only a few seconds to climb their ladders, cut the strips, unroll the scenes and tack the lower edges. They were so proud of their achievement that the curtains were opened so the audience might see how they handled the situation. Heretofore, there had usually been a long delay and a great deal of paper crackling when the backgrounds had to be put into place.

1. Egyptian scene.
   An unfinished pyramid. Large figures dragging a sled with blocks of stone.
2. Grecian scene.
   The Parthenon on the Acropolis.

3. Roman scene.
    The Colosseum.

B. Panels on folding screens.

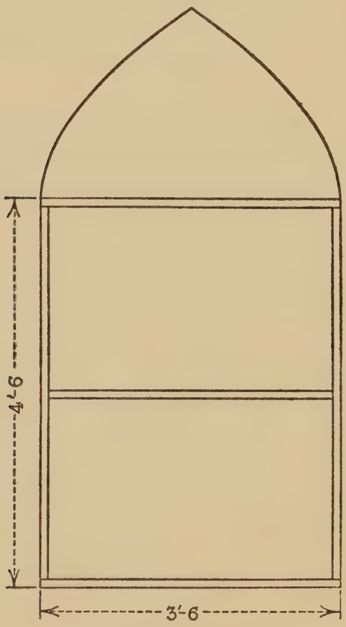
Strips of wrapping paper were measured and cut to fit the panels of the folding screens used for side wings.

Full-length columns of the Egyptian and Grecian eras were drawn on the panels. These also were done with chalk, which is an easy and rapid method for covering large surfaces.

Lotus columns with papyrus decorations were chosen for the Egyptian scene.

Ionic columns were selected for the Grecian and Roman scene.

C. Making a Cathedral window.



Cathedral Window

Fig. 81.

1. Materials used.
    a. Two 1-inch strips of lumber 4 feet 6 inches long.

- b. Three 1-inch strips of lumber 3 feet 6 inches long.
- c. 2 thin strips of lumber about ⅛-inch thick and 3 feet long.
- d. Butcher paper 4 feet by 6½ feet.
- e. Linseed oil.
- f. Calcimine, brushes, India ink.

2. Method of construction.

The two 4 feet 6 inch strips of lumber were nailed to each end of the 3 feet 6 inch base. To these were fastened the thin strips of wood which were brought to a point. Over the point was nailed a strip of tin to help keep them in the proper shape. Thin strips had previously been soaked in water and bent. When dry they kept this shape and they were ready for the upper part of the window. The other two 3 feet 6 inch strips were nailed across the frame to keep the sides parallel.

The strip of wrapping paper was laid flat on the floor, and covered with water. On the watered surface, green, red, blue, and yellow calcimine was dropped in large spots but not too close together. Two children at each end of the paper in turn raised their end and let the colors slide along the paper for the stained-glass effect. When dry the frame was laid on the paper, and the outline and tracery were marked off in half-inch widths. This was filled in with India ink, using small brushes. The next step was to make this transparent. Linseed oil was rubbed over the back of the window with small pieces of cloth. The surplus oil was removed with cheesecloth.

The wood frame was laid on the wrong side of the paper. Then the paper was brought up over the edge of the frame, tacked in place and trimmed.

III. Making costumes.

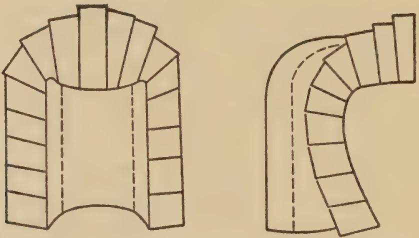
A. Egyptian costumes.

1. The ruler's wig.

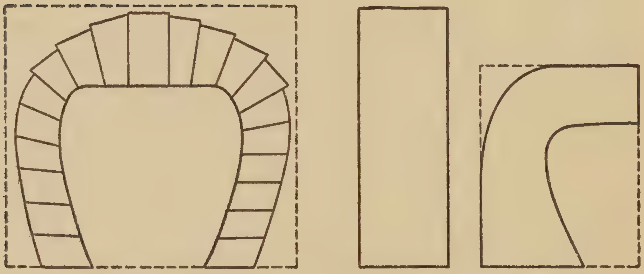
- a. Materials needed.
  - (1) Black hairy cloth.
  - (2) Black thread, needles, pins.
- b. Method.

A center section, 6½ inches wide, was cut reaching from the eyebrows up over the head to below the hair line. Side pieces were cut to join the forehead section to the rear section. These were pinned, placed on the ruler's head, fitted and sewed permanently. A coiled paper serpent was sewed to the center of the forehead. A 6-inch strip of cloth was also cut and shaped for the ruler's beard.

2. Headdresses.



Front View   Side View



Front   Center   Side

EGYPTIAN HEADDRESS AND WIG

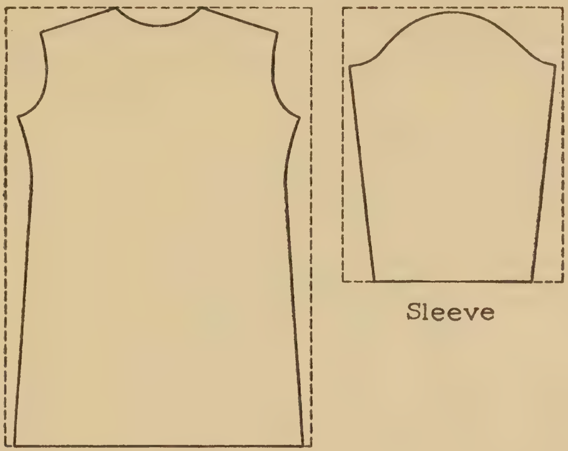
Fig. 82.

a. Materials needed.
    (1) Wrapping paper.
    (2) Calcimine, brushes.
    (3) Adheso.
    (4) Scissors.

b. Method.

The foundation of the headdress was made just as the wig was made. A 3-inch strip was glued to the front edge, across the forehead and down each side. Stripes of bright-colored calcimine were painted on this strip.

3. Egyptian garments.



Egyptian Garment

Sleeve

Fig. 83.

a. Materials needed.
    (1) Brown cloth.
    (2) Newspapers for patterns.
    (3) Sewing thread.
    (4) Sewing needles.
b. Method.

The boys were practically the same size so only one pattern was necessary. The garment was to be knee length and straight hanging.

A pattern was cut from a newspaper. Care was taken to allow for seams. The children were shown how to shape the neck, shoulders and armhole.

The children were shown how to shape the sleeve pattern at the top and bottom.

The garments were basted up, tried on, fitted and sewed permanently with a short running stitch.

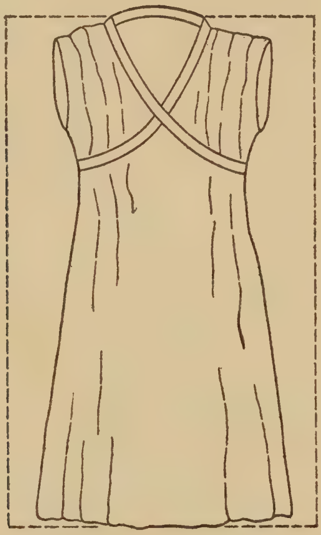
The bottom of the sleeves and skirt were turned in twice and hemmed with a running stitch.

4. Bracelets.

Bracelets of various widths were cut from corrugated paper and painted with calcimine in bright colors. These were pinned around the arms of the Egyptians.

To complete the costumes sashes were added. These were bright-colored remnants, tied loosely about the waist and hanging at the front.

B. Grecian robes.



Grecian Robe

FIG. 84.

1. Materials needed.
    a. Two lengths of white cheesecloth.
    b. Strips of yellow cambric 2 yards 24 inches long.
    c. Strips of yellow cambric 1 yard long.
2. Method.

The two lengths of cheesecloth were stitched at the seams leaving a 10-inch opening at the top for armholes. The upper edge was hemmed and gathered into a 24-inch opening. This was the neck. This was stitched to the center of the strip of yellow cambric leaving two ends free, each 1 yard long. These were crossed in front, brought around under the girls' arms and tied at the back at the waist line. The lower edge of the robe was hemmed. The shoulder seams were gathered so that the garment fell in soft folds from the shoulder.

The 1-yard strips were used to wind twice around the girls' heads.

C. Roman armor.
    1. Shields.
        a. Materials needed.
            (1) Cardboard packing boxes with large surfaces.
            (2) Brown calcimine.
            (3) White calcimine.
            (4) Strips of burlap (sacks).
            (5) Brass paper fasteners.
        b. Method.

The boys decided to have round shields 22 inches in diameter. They had found some Roman shield designs when doing research work. They had also discovered that the Romans made their shields of bronze. Brown calcimine was to be used for this effect. The designs were painted with white calcimine.

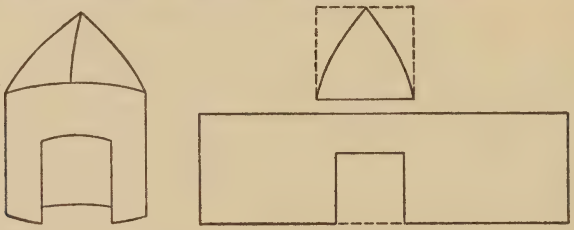
The large packing boxes were obtained at a department store. The straps through which they put their arms were made of strips of burlap. These were fastened to the shields with large brass paper fasteners.

    2. Swords.
        a. Materials needed.
            (1) Knives for whittling.
            (2) 3-inch strips of lumber.
            (3) Sandpaper.
            (4) Brown calcimine.
        b. Method.

The swords were 15 inches long with a 7-inch crosspiece at the hilt. The blade was shaped to a point and beveled at the edges with knives. Both the crosspiece and the blade were knotched where they were to be fitted together. The hilt was also shaped to fit the hand. After the swords were sandpapered, they were bronzed with brown calcimine.

3. Helmets (Roman).
    a. Materials needed.
        (1) Wrapping paper.
        (2) Needles, thread.
        (3) Aluminum paint.
    b. Method of construction.

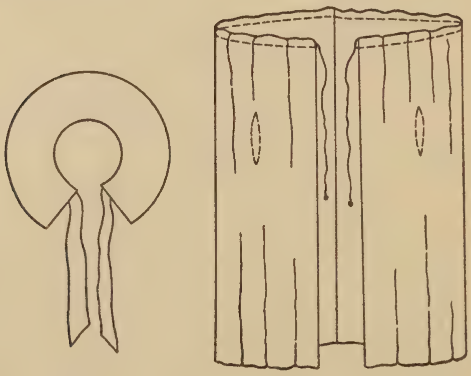
Four triangular sections 6½ inches on each side were cut of wrapping paper. These when stitched formed the pointed upper part of the helmet. The lower part was a strip of wrapping paper 26 inches long and 9½ inches wide. The ends were lapped over and stitched. An opening 4 by 6 inches was cut at the front. The upper edge was stitched to the part made up of the triangular sections. It was then ready to be painted. These measurements were suitable for all the boys.



ROMAN HELMET

FIG. 85.

D. Choir robes.



Collar

Choir Robe

FIG. 86.

1. Materials needed.
    - a. Two lengths of black muslin.
    - b. Stiff white paper for collars.
2. Method.

The two lengths were sewed, making one seam down the back. The two front seams were left open. They were hemmed at top and bottom. A draw string was pulled through the top hem. This was gathered around the child's neck. Slits were cut at a convenient place for the hands to come through to hold their songbooks.

Peter Pan collars were cut of stiff white paper. Narrow strips of black cloth were stitched to these for tying in place.

IV. REPRODUCING WRITING MATERIALS.

A. Greek wax tablet.

1. Materials needed.
    - a. 12- by 18-inch boards.
    - b. Half-round molding.
    - c. Wax.
2. Method.

The half-round molding was fitted to the face edge of the board. Melted wax was poured on the surface. When hardened, the Greek alphabet was marked off with a stylus (pointed stick).

B. Roman scrolls.

1. Materials needed.
    - a. Two 12-inch lengths of a broom handle or other round sticks.
    - b. Wrapping paper 12 inches wide and 3 feet long.
2. Method.

Each end of the strip of wrapping paper was tacked to a round stick. Quotations were printed lengthwise on the paper, using Roman letters. The strip was rolled from each end with the lettering inside.

C. Parchment paper.

1. Materials needed.
    - a. Linseed oil.
    - b. Wrapping paper.
    - c. India ink.
2. Method.

Very simple illuminated lettering was done on 9- by 12-inch sheets of wrapping paper. The children chose different mottoes to letter. The sheets were rubbed with linseed oil on the wrong side to give the paper the parchment effect. A very small circular motion was used for this, leaving uneven spots of paper between. This created an interesting effect.

V. Arts and crafts.
- A. Making book ends.
  - 1. Materials.
    - a. Blocks of wood.
    - b. Scraps of tin or thin copper.
    - c. Nails.
    - d. Hammer.
  - 2. Method.

Thin copper and tin were made into book ends and table tiles with very few tools. Architectural designs were first planned on drawing paper.

The metal was placed on a block of wood and the design punched in with various sized nailheads. Some of the nails were shaped like dull chisels so as to be used for lines and shaping of edges of the relief forms. Parts of the background were flattened down or stippled with the points of the nails.

When the designs were completed, the pieces of tin were fitted over the blocks of wood and nailed in place. Those who wished to make book ends first inserted metal pieces to produce book supports.

The pieces of tin were obtained by the boys from scrap heaps at plumbing shops.

- B. Making block prints.
  - 1. Materials.
    - a. Inner tubes.
    - b. Poster paints.
    - c. Glue or adheso.
  - 2. Method.

Block-print patterns were cut from inner tubes and glued on blocks of wood. The part to print the pattern was the raised part of the block. This was inked or painted with color. Some of the children had several colors painted on the one block. The block was then put face downward on the cloth in the right position and location and the back tapped with a hammer. Chalk lines on the cloth supplied guide lines for placing the blocks.

C. Making spatter-paint wall hangings.
  1. Materials.
    a. Stencil sheets.
    b. Brushes.
    c. Knives.
  2. Method.

To make these, a stencil was cut so that the subject was in silhouette. The stencil was placed in position over the cloth, which had been marked off with chalk lines. The rest of the cloth was covered with newspaper. A small paintbrush or toothbrush was covered with tempera paint. The paint was not too thick nor too thin. As a knife edge or a stick was passed over the brush tips, the paint spattered onto the cloth. It was necessary to practice on paper first to show just how and where to hold the brush to make the spatter go correctly.

When several colors were used on one hanging, more than one stencil had to be cut, and more than one brush used. In this way the colors were kept clear and clean.

VI. STAINED-GLASS WINDOW DESIGNS.

This required a series of art lessons, including one on floating water colors.

Two types of designs were made, the wheel window and pointed Gothic window.

1. Materials needed.
  a. Water colors, brushes.
  b. White drawing paper.
  c. Black construction paper.
  d. Newsprint.
  e. Scissors.
  f. Paste.
2. Method.

Floating water colors was fun. The surface of 9- by 12-inch white drawing paper was brushed with water. Immediately spots of water colors were brushed into the water. The paper was lifted and gently tipped so that the colors merged.

The wheel-window designs were made by folding 9-inch circles of newsprint into eights. With scissors the hub and spokes of the wheel were cut. Some very intricate, interesting designs were cut. These were traced on the black paper and the spaces cut away. The black wheels were pasted over the floated colors. The edges of the water colors were trimmed off. The window designs were placed under a pile of magazines until dry to prevent the paste from warping the paper.

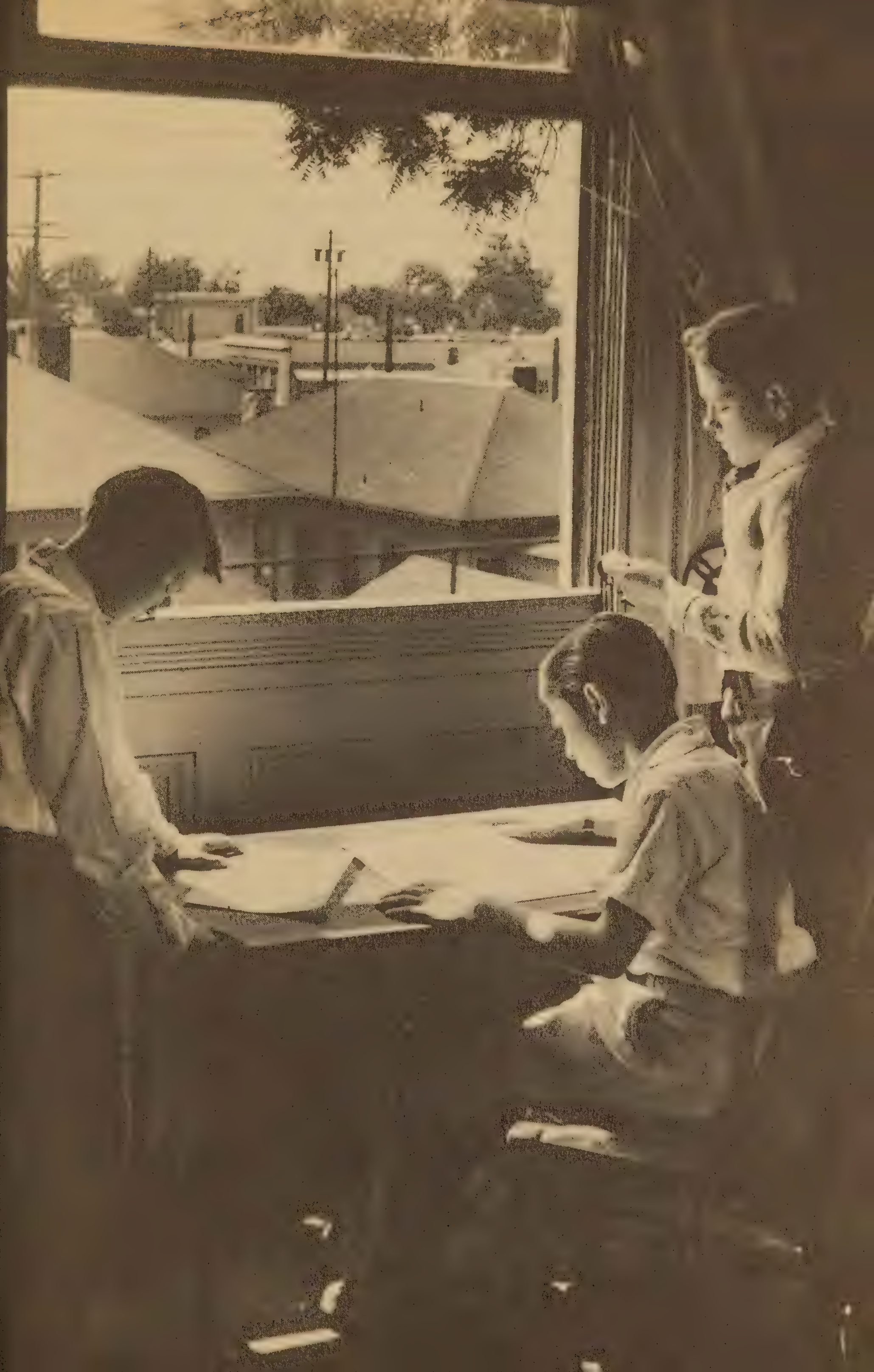
The Gothic window was made by the folding lengthwise 9- by 12-inch newsprint. About one-third from the top, it was cut into a pointed window. It was opened up and each edge folded to the center line. Each of these again was cut into a pointed window design, leaving horizontal and vertical crossbars. This design was completed in the same manner as the wheel window.

The wheel-window designs were pinned to the window curtains. They were very colorful with the light shining through. Others with the Gothic designs were placed in the class book, and some were placed on display on one of the school bulletin boards.

VII. MAKING PEEP SHOWS.
  A. Materials.
    1. Tissue paper.
    2. Chip board.
    3. Shoe boxes.
    4. Salt and flour.
  B. Method.

Peep-show groups were made to illustrate stories or social studies talks. Different parts of pictures were arranged as a stage setting. These parts were the sky, mountains (if any), the featured building and figures in the foreground. When put in front of each other and placed in the box, they looked very complete. The covers of the boxes were different tissue-paper coverings. These coverings were sometimes changed so that the light coming through such as a deep-green tissue gave a night effect. Light-yellow paper gave a sunshine quality.

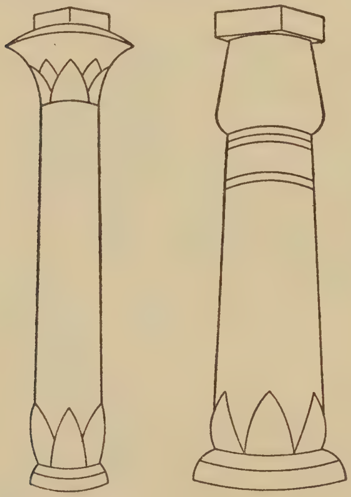
● FIG. 87.—*Young architects make their own blueprints.*



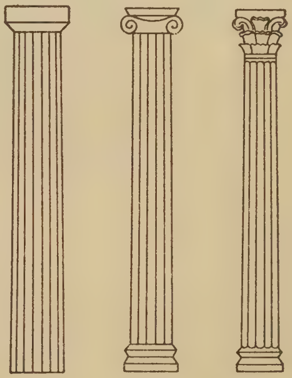
The parts were cut out of chip board, painted and placed standing in the ground. The ground was made of the same salt-and-flour mixture used in constructing the miniature famous buildings. When this dried, the parts were held in place.

C. Scenes illustrated.
  1. A Greek theater.
  2. The Olympic Games.
  3. The Colosseum.
  4. A cathedral interior.
  5. St. Mark's Square.
  6. The return of a Roman conqueror.
  7. Building a pyramid.
  8. Transporting blocks of stone on the Nile.

VIII. MAKING BLUEPRINTS.


Papyrus Flower Papyrus Bud

EGYPTIAN COLUMNS
FIG. 88.

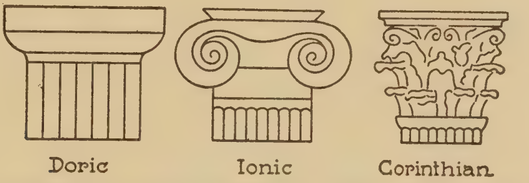

Doric Ionic Corinthian

GREEK COLUMNS
FIG. 89.

A. Materials needed.
  1. Blueprint paper.
  2. Glass windowpane.
  3. Developing salts.

B. Method.

Many different designs were used for the blueprints. Some of the children wished to use the floor plans and façades of construction problems. Others used the Greek orders, Egyptian designs, arch and window designs. These had to be traced on thin tracing paper with India ink.



CAPITALS OF THE THREE GREEK ORDERS

Fig. 90.

The necessary blueprint paper was bought from an architect's supply house. Great care had to be taken to exclude the paper from light and air. It was cut into the required sizes beforehand in a dark closet.

The design which was to be used was placed under a glass windowpane on a table. The blueprint paper was slipped underneath with the sensitized surface up. The group in charge worked quickly without exposing it unnecessarily to the light.

The table was then placed in the sunlight before an open window. The exposure was timed. Prints were made on several different days. The time varied from 1 to 3 minutes depending on the suns' rays on that day. When the exposed surface seemed dark enough, the glass and design were lifted and the paper taken out.

It was immersed immediately first in clear running water, then in the developing salts solution, and again in clear water. It was spread on a cloth to dry. The blueprint was trimmed to the right size and mounted.

IX. Charts.

A. Architecture Marches On.

This grew out of the current news discussion, Time Marches On, which was held several times a week.

The chart was made on wrapping paper 10 by 4 feet. Steps were marked off 13 inches long and 4 inches high starting with the lower left-hand corner.

The committee used 9- by ½-inch drawing paper for planning the buildings for each type of architecture. These were cut of dark paper and pasted over the steps. Each step was labeled. The approximate time was also placed underneath the steps (see "Narrative Account: Reading Periods to Solve Problems").

Not knowing what type of architecture might be introduced in Tomorrow's Architecture, 50 years from now, a question mark was placed over that step.

B. Archways through the Ages.

When the children were doing research, they were continually finding various types of openings, doorways and windows. A committee was organized to develop a large chart so that they might have a record of the development of doorways.

It was their decision to include the following: Cave, Egyptian, Greek, Roman, Moorish and Gothic.

These were cut of dark paper and pasted on a sheet of wrapping paper 3 feet by 4 feet 6 inches. It was also their task to plan the lettering and arrange it neatly.

C. Types of Grecian Pillars.

Three children developed this chart on wrapping paper 3 feet by 4 feet 6 inches. The pillars were first drawn freehand on newsprint, and then carefully measured. When the necessary corrections were made, the drawings were transferred to the chart. Care was taken in arranging the lettering.

They worked quietly on the floor in one corner of the room. When completed, the chart was presented to the class and hung in one of the pinning spaces. They were very proud of their accomplishment as they were of the newer group in the room. They had not been in this room when the unit Life in Ancient Greece had been developed.

X. KEEPING A VOCABULARY NOTEBOOK.

The cover pages were made of 1-inch cross-section paper. Interesting designs were drawn in the squares with crayons of harmonizing colors using architecture as the motive, pillars, arches, buildings, moulding designs, lotus bud, acanthus leaf, etc. Fifteen sheets of paper were inserted. Each page was lettered as a dictionary.

There were extra pages, as from previous experience it had been found that certain letters of the alphabet were more commonly used. It was decided to label the title-page:

European Architecture
New Vocabulary
Name
Grade

Meanings were sometimes given by the children without any research work. At other times, it was necessary to refer to books on architecture or to the dictionary.

Sometimes new words were placed on a space reserved on the blackboard by the children when they were solving problems by doing research reading. Words were:

Egyptian Architecture

alabaster—a soft limestone used for making monuments.
capstone—the top stone of a pyramid.
Gizeh—a place in Egypt where the largest pyramid was built.
hieroglyphics—Egyptian picture writing.
lotus—Egyptian water lily.
mummy—a dead body as it was preserved by the Egyptians.
Nile—the great river in Africa.
obelisk—a square pillar with a top like a pyramid.
Osiris—Egyptian god of farming.
papyrus—a reed from which the Egyptians made paper.
pharaoh—a king of Ancient Egypt.
pyramid—a tomb built by the Egyptians.
scarab—sacred beetles used by the Egyptians as ornaments.
Sphinx—an Egyptian statue, a lion's body with a man's head.

Greek Architecture

acanthus—a leaf used by the Greeks for ornament.
Acropolis—a hill in Athens on which some of the temples were built.
base of a pillar—that part of the pillar on which it stands.
capital of a pillar—the topmost part of a pillar.

caryatid—a marble figure of a woman used in place of a column by the Greeks.
cella—the room in the temple for the statue of the goddess.
colonnade—a long row of columns.
fluting—grooves along the shaft of a column.
frieze—a band of ornaments such as the procession on the walls of the Parthenon.
Parthenon—the most beautiful temple built by the Greeks.
pediment—the triangular end at the end of the roof of a building.
shaft of a pillar—the long main part of a pillar.
stadium—an oval-shaped athletic field with rows of seats built in tiers.
theater—hollowed out from the side of a hill in a semicircle.
volutes—the spirals at the top of an Ionic pillar.

Roman Architecture

acqueduct—a way for carrying water; sometimes bridges were used.
amphitheater—an oval arena with tiers of seats. It has no roof.
arch—a curved opening half as high as it is wide.
basilica—a Roman building for business purposes.
catacombs—tunnels underground where Christians worshiped.
keystone—the center stone in a Roman arch; the last one to be placed in position.
pediment—the triangle underneath each end of the roof; used by the Romans only on temples.
Tepidarium—the great hall, slightly warm, in the Roman baths.
Triumphal Arch—a large arch built for a Roman conqueror.
voussoirs—pointed stones on the rounded part of a Roman arch.

Byzantine Architecture

apse—a semicircular part of a church with an arched roof.
baptistery—the part of a church where people are baptized.
Basilica Church—name given to the early Christian church, which had three or five aisles and an apse at one end.
domes—a rounded roof rising above a building.
incised patterns—patterns cut into stone, wood or metal.
mosaics—pictures made of pieces of colored glass or marble set in cement used on floors and walls.
narthex—the open part of a church at the front, open and colonnaded.
nave—the long arm in the cross-shaped floor plan of a Christian church.
transept—the shortened part of a cross-shaped church.

Romanesque Architecture

campanile—a high bell tower.
cathedral—the church of the bishop.
cloister—a place in which monks live.
cruciform—cross-shaped.
crypt—a place under the church for keeping holy things.
frescoes—paintings made on a plaster wall before it is dry.
recessed doors—doors set back from the outside edge of a wall.
vaulted roof—a roof built with a series of arches.
rose window—a round window with rose-petal designs.

Gothic Architecture

cathedra—the bishop's chair.
cinquefoil—a design with five petals.
flying buttress—a prop built against a wall.
gargoyles—queer carved waterspouts on cathedral roofs.
lancet arch—a pointed arch.
pinnacle—a spire built on a buttress.
portcullis—a sliding grating to close up a passageway.
quatrefoil—a design with four leaves or petals.
ribbed vaulting—a vault of masonry supported by ribs.
spires—the tall points on a roof.
stained glass—glass of many pretty colors.
trefoil—a design with three petals.
turret—a little tower at angles of a larger tower.
wheel window—a round window with a hub and spokes worked out in fancy designs.

Renaissance Architecture

balustrade—a railing around a roof or porch or steps.
Baroque—heavy decorations.
frescoe painting—painting done on a wet plaster wall.
gilding—gold painting on statues and decorations in buildings.
masonry—stonework.
pilasters—part of a column placed against a wall.
rococo—a flowery manner of design.
rusticated masonry—roughly carved stonework.

XI. CREATING ORIGINAL INTERPRETIVE DANCES.

A. Offerings to the goddess Athena.

Music used: Brahms Waltz.

This was a very simple dance made up of steps which the girls suggested. One of the girls was the goddess. She was dressed in a yellow cheesecloth robe. She was standing on a box at one side of the stage in front of the Parthenon.

The maidens came forward, waltzing, carrying flowers in their outstretched arms. These were placed before the goddess. Then with short running steps they ran to the center of the stage, getting into a circle formation.

Hands were joined and the circle moved to the right, then left, several times, balancing and taking short running steps forward.

For several measures this movement was used: waltzing toward the center of the circle, arms up and out in front, almost touching the opposite hands and gracefully letting arms fall and swing out at the sides.

This was alternated with the first step and then repeated. More variety was introduced when the girls pirouetted in place with their hands almost touching overhead. At the conclusion, all knelt before the goddess with arms outstretched.

B. The Gladiators.

Music used: "Entry of the Gladiators."

Six gladiators entered the stage with a conquering marching step, shoulders back, shields protecting their left side and swords held at an angle ready for a thrust. They faced each other in two lines. The lines advanced several times, clashing shields and crossing swords. Then two gladiators at a time came to the center, circled around each other at the same time clashing their shields and crossing their swords. The others, keeping time to the music, and leaning forward, were poised ready for their combat.

When all had met in single combat, the two lines met again. This time three fell to the ground. The conquerors, with one foot on the fallen gladiator, looked at the audience as if for the signal "thumbs down." They drove the swords through the bodies (but at one side) of the fallen heroes and after having proudly circled around the victims, strutted off the stage.

XII. DRAMATIZING STORIES.

There were a great many impromptu dramatizations given during the development of the unit. Stories for this purpose were chosen either from those read by the teacher or from those read by the children. A story in which there was much conversation proved to be the most successful. (See Consumers' Enterprises, Enjoying Stories Told by the Teacher.)

The dramatization was always in charge of the children. A stage manager was appointed. It was his duty to plan and announce the scenes. He chose his actors. A little time was taken for a conference with his actors.

The children were familiar with his guide for conversation.

1. Let the conversation show the character of the speaker.
2. Let the conversation show what things are going to happen or are happening.
3. Be sure that the conversation is natural. Use words that the characters would be likely to use.
4. Omit conversation that doesn't help to tell the story.

At the end of the dramatization, the audience and very often the actors, too, evaluated their production.

Judging the dramatization.

1. Were the scenes full of action?
2. Did the actors speak clearly?
3. Did the actors live their parts?
4. Did the dramatization really tell the story?
5. Was the audience courteous?

XIII. COMPOSING VERSE.

The children from time to time expressed themselves through verse. Some preferred to work alone. Others worked in groups of two, three and four.

At such times, beginning lines were placed on the board to help them. They readily suggested picture words and phrases that could be used.

Some examples of the verse:

Far away across the sea,
Lies Egypt with its pyramids,

Land of ancient pillars tall
With lotus buds and blossoms, too.
Where kings were made into mummies dry
And placed in stony tombs so high.

Philip Roehr
James Beardsley
Walter Chelonis
Wayne Ware

CASTLES SO GRAY

Castles so gray on the hill tops,
With winding moats for protection.
Towering over the country and forests,
Where knights of old fought for their lords,
Where kings lived and ruled over one and all,
And in the halls so great and dim,
Were hung the shields and armor.

Walter Chelonis

GOTHIC SPIRES

Gothic spires pointing to the skies,
So slender and so tall,
Standing so high and
Towering over the city.

Gothic spires pointing to the skies
Like two hands pointing to heaven;
Above the stained-glass windows
On the cathedrals so very old.

Josephine Ingegneri

ARCHITECTURE MEANS TO ME

Architecture means to me,
Beautiful buildings straight and tall,
In Greece the Parthenon so old,
And the Roman arches so strong.

Architecture means to me,
The Alhambra so colorful and gay,

The cathedrals with towers tall,
And stained-glass windowpanes.
Eleanor Guissi

ARCHITECTURE TO ME

Architecture means to me,
Buildings that we like to see,
Designs all around the walls,
Rugs and drapings in the halls.

Architecture means to me,
Castles on rocky cliffs,
Marble temples over the sea,
And cathedrals with lofty domes.
Elaine Budros
Addie Ashby

MARBLE TEMPLES

Marble temple in the days of old,
Were built in honor of Athena,
The Parthenon with its pillars tall,
On the Acropolis can still be seen.
Where people offered their sacrifices
With offerings of gold and silver,
On the altar by the statue,
Worshiped by the Greeks so long ago.
Jeanette Drouet
Laureana Valdez

ROME OF ANCIENT TIMES

Rome had its triumphal arches,
Through which soldiers marched so gaily
Greeted by thousands of Romans,
Near the scene of the chariot races.

Blocks of stone fitted and held
By the keystone in the center of the curve.
Ruined but still beautiful today,
Though standing through thousands of years.
Frank Rivera
Ralph Moss

GOTHIC SPIRES

Gothic spires reach to the skies,
Graceful and slender and tall,
On cathedrals so high,
Towering over the city wall.
Loved by those who are near,
And others who come from afar.
Virginia Heiser

CASTLES

Towering over the countryside,
Are castles so gray and old,
Homes of the knights so brave,
Who fought for their lords and ladies fair,
Wandering minstrels sang in these castles,
Some of which are standing today.
Melvin Fassas

XIV. Story writing.

A. Stories of the famous buildings of Europe.

During the progress of the unit much information was accumulated by the children about famous buildings of Europe.

During the related English period, this information was organized into interesting short stories. These were to be placed in a class notebook. Copies were made and sent to the childrens' page of a local newspaper.

Saint Sophia

Saint Sophia was one of the most beautiful Christian churches in Istanbul, which is in Turkey. Many people go to see Saint Sophia. It has many beautiful designs on the walls. When you go inside, you will see many beautiful pillars and arches. Now it is no longer a Christian church. The Turkish people have made it into a mosque. It was built by Justinian, a Roman emperor. He named the city Constantinople. If you went there you would want to go and see it again.

Susie Picone

Cologne Cathedral

The Cologne cathedral is in Cologne. It is still standing. The Cologne cathedral has tall spires. There are stained-glass windows put together with lead.

When you go in the Cologne cathedral you must look at the beautiful windows and see the light shining through. There are many pictures of Christ and His life. This cathedral has Gothic doorways with arches that look like two hands pointing to heaven.

Dorothy Kennedy

The Pyramids

The pyramids were built six thousand years ago in Egypt. These pyramids were built as tombs, only for the kings and queens. They had them built before they died, for it took many years to build one pyramid.

When they died they were made into mummies and put into a mummy case called a sarcophagus. Then it was put in the pyramid. The Egyptians also put all their possessions in the tomb, for they believed that their spirit was still alive.

The pyramids are pointed at the top and have four sides. They are near the Nile River. They had to have slaves to build the pyramids. The slaves had to push and pull the huge blocks of stone.

Saint Sophia

Saint Sophia is in Istanbul in Turkey. A Roman ruler, Justinian, had it built. It is Byzantine architecture. Saint Sophia was built about one thousand years ago.

You can tell that it is Byzantine architecture because it has one big flattened dome in the middle and small domes around it. There are also little spires between the domes.

It is no longer a Christian cathedral now. The Turkish people have made it into a mosque.

Esther Ferrari

St. Mark's

St. Mark's is a cathedral in Venice, the city of water streets. It is a very large building. People come to visit St. Mark's over and over again, because it is so beautiful.

It is a very old building. It was built about 1050 A.D., when Venice was young. It has Byzantine domes on it, but they are onion-shaped. They didn't have machinery then, and so they had to build it by hand. It has beautiful pictures on the walls, which are called mosaics.

Addie Ashby

The Pantheon

The Pantheon is in Rome. It is a very large building. It has a big dome on top. The dome is round. The Romans were the first people who built round buildings. Even though part of the Pantheon is round, it has a Grecian porch with Corinthian pillars.

It was to be the home of the gods and goddesses of ancient Rome. The Romans copied Greek architecture and changed it, too. The front of the Pantheon is like that of the Greek temples.

Nettie Juarez

The Colosseum

The Colosseum is in Rome. It is round with many seats. It was built to entertain the people of Rome.

Sometimes the gladiators had terrible fights. If a man was thrown to the ground and the people wanted him to die, they put their thumbs down; and thumbs up, if they wanted him to live.

The Colosseum has many Roman arches. Some of the Colosseum is still standing, but most of it is in ruins.

It was made of granite and cement. It was built about two thousand years ago.

St. Mark's

St. Mark's Cathedral is in Venice in Italy. The Cathedral of Venice is very beautiful. It is one of the most beautiful cathedrals of the world. They built it by carrying in all the parts by boats.

The rulers of Venice commanded the merchants to bring something for the Cathedral whenever they returned to Venice. The merchants brought many kinds of marble from many lands.

Ralph Moss

The Parthenon

The Parthenon was built about three thousand years ago in Athens. It was built to worship the goddess, Athena. It was built on the Acropolis. There were eight pillars across each end and seventeen on the sides.

The Parthenon did not have any windows. It had only openings underneath the roof because it was very hot in Greece.

The Persians came over to Athens and destroyed the Parthenon. But part of it is still standing. Many people from many parts of the world come to see the Parthenon every year.

Joe Riggio

B. Stories of the excursions taken.

Stories were written about the progress of the unit and excursions taken to be printed in the "Room News" section of the school newspaper. Copies of these stories were placed on file in the class notebook also.

Interesting Buildings in San Jose

The high fifth and low sixth grades went on a trip to find out what kinds of architecture we have in San Jose.

One of the buildings was the Trinity Church. It has beautiful stained-glass windows. It is a Gothic building. Part of the church isn't nailed together. It is put together by wooden pegs.

It is seventy-five years old. After we had visited the Trinity Church, we went to Saint Joseph's Church. It is Byzantine architecture. It is cross-shaped. It had a large dome with smaller domes around it. Inside as you look up to the dome, there are pictures made of stained glass. After that we visited many other interesting buildings.

Jeanette Drouet

Architecture in San Jose

The high fifth and low sixth grades took a trip to see the different kinds of pillars on the buildings in San Jose.

We each took pieces of paper. We found Doric, Ionic and Corinthian pillars. In front of some of the buildings we wrote the name and the kind of pillars used on it. At one church our teacher took us inside. The church had many beautiful things that we are going to study about. All the buildings had the different kinds of pillars.

The children were very nice going and coming. We had lots of fun walking and looking at the beautiful churches and buildings.

Jimmy Di Napoli

Studying Architecture

In the high fifth—low sixth room we have been studying about architecture. We made a large chart with steps on it. On these steps we have buildings. We call this chart "Architecture Marches On." We have different names for each step, according to the type of architecture. The types of architecture changed as the years went by. It starts with Egyptian. Then comes Greek, Roman, Byzantine, Romanesque, Gothic, Renaissance, Today and Tomorrow.

We have another chart. It is called "Archways through the Ages." Arches and doorways have also changed as the years have gone by. The arches on this arch are the cave doorway, Egyptian, Grecian, Roman, Moorish and Gothic arches.

The third chart has three types of pillars. This chart is called "Greek Pillars." The names of these pillars are the Doric, Ionic, and Corinthian pillars. The reason we have this chart is because so many buildings in San Jose have copied these pillars.

Dolores Gilardin

A Trip to St. Patrick's Church

Our class went to see St. Patrick's Church one morning to see if we could find out what kind of architecture it is.

We went inside to see how the sun came through the stained-glass windows. We learned the difference between a wheel and a rose window. The rose window looks like rose petals. The wheel window has spokes. St. Patrick's has a beautiful rose window.

We walked around it to see the flying buttresses on the sides of the church. These help to hold up the building. This church has tall towers. We decided that it is Gothic architecture.

Josephine Ingegneri

C. Make-believe stories.

The writing of make-believe conversations proved to be an interesting related English lesson. These conversations took place between spectators watching the construction of the famous buildings in Europe. There had to be some research work done to find suitable names for the spectators. These are some of those suggested for each particular building.

Augustus, Julius—Triumphal Arch.
Maria, Antonio—St. Mark's.
Hansel, Gretel—Cologne Cathedral.
Caesar, Cicero—Pantheon.

Chartas, Brasidas—Parthenon.
Titus, Gracchus—Acqueduct.
Mark Antony, Valerius—Colosseum.
Meneptah, Khnumu—Pyramid.

The Pyramid in Egypt Long Ago

Six thousand years ago an Egyptian king had ordered a pyramid to be built. It was going to be the biggest that had ever been built. Two Egyptian boys, Meneptah and Khumu, were watching it. Khumu asked Meneptah, "Why does the king want a pyramid?"

Meneptah said, "It is to be his tomb when he dies." Meneptah then said, "It takes many, many years to build a pyramid. The slaves pull and pull to bring one block of stone." "But do they just pull the block?" "No," said Meneptah to Khumu, "the slaves also put the blocks of stone on sleds. Sometimes the sleds get stuck." "Then what?" said Khumu.

"They get long poles and pry it out. The king would rather have a tomb instead of a palace. When the king dies we will put in all that he owned and used when he was alive. When the pyramid is finished it will be tall and come to a point."

James Beardsley

St. Mark's in Venice

Maria and Antonio were Italian children who were watching the St. Mark's church being built in Venice about sixteen hundred years ago. Antonio asked Maria, "What is the floor plan of St. Mark's?" Maria answered, "The floor plan of the church is a cross. That kind of architecture is Byzantine."

"How do you know that the church is Byzantine?" asked Antonio. Maria said, "St. Mark's has four little domes and one big flattened dome in the middle. But what I can't understand is why they are building it in honor of St. Mark?" "Oh," said Antonio, "St. Mark was a saint. He had a pet lion who liked him. They are going to carve a statue of the lion at the entrance."

"How interesting," said Maria. "This church will surely be the most interesting church in all history."

Dorothy Kennedy

The Aqueducts of Rome

Titus and Gracchus were watching an aqueduct being built in Rome about two thousand years ago. Gracchus said, "Why is it being built?"

Titus replied, "It carries water from the mountains to Rome." Titus said, "Then it is like a long bridge." Gracchus said, "Yes, sometimes it is a tunnel when it has to go through a mountain."

The two men saw them put one stone over another.

Gracchus said, "Don't the people of Rome drink the water that there is here?" Titus said, "We don't drink the water because it is not good in the Tiber River nor in our wells. So we have to go up in the hills to get our water."

Vivian Peres

St. Mark's in Venice

St. Mark's was built in Venice nine hundred years ago. One day Maria and Antonio were watching the men build the church.

"It is a very large cathedral, isn't it?" said Maria. "Yes, it is a large building," said Antonio, looking up at it.

"How long have they been working on it?" said Maria to her brother. "They have been working on it about 10 years now. Do you remember what papa told us about how the Greek people made their temples and how long it took them?" "Yes, I do. He told us that it took many, many years to build one of those temples well." "Just think how much larger this is and how much longer it must take to build this building." His sister looked up at it and said, "It is getting more beautiful every day."

"Here comes a sailing vessel loaded with pillars of marble." "I wonder where it is coming from," said Maria. "I heard father say that they expected to have some marble from Greece today so I guess this is it," said Antonio.

Jimmie Murphy

The Parthenon

Many thousands of years ago in the days when the Greeks believed in twelve gods, the Parthenon was being built. Chartas and Brasidas were watching the Parthenon as it was growing.

Chartas said to Brasidas, "How long do you think it will take to finish the Parthenon?" Brasidas said, "About five more years. You know how long it takes to bring the blocks of marble up the Acropolis. The hill is very high," Chartas said, "Yes, it is very high, but we have some good donkeys to carry the blocks of stone."

Brasidas said, "It will take a long while but we have lots of time."

Five years went by. The Parthenon was now finished. Brasidas and Chartas were now big boys. They were filled with glory when they heard that the Parthenon was finished. Then a terrible thing happened. The Turks destroyed the buildings of Greece and even the Parthenon. The buildings are still there but only ruins are left.

George Mack

Triumphal Arches of Rome

It was a day, two thousand years ago when Julius said to his brother, "Let us go down to watch the men finish the triumphal arch for the procession tomorrow." "Very well," said his brother.

Augustus was much younger than his brother. "What is a triumphal arch and a procession?" "It is an old custom in Rome. When a commander is successful in conquering another land and he is on the way back they build a triumphal arch for him to march through. When he marches through with his captives and booty that is called a procession. There are many of them in Rome."

"I should like to be a commander when I grow up," said Augustus. "Maybe you will be a commander." Julius spoke up again, "They make all the arches of big blocks of stone that are piled up to form a triumphal arch." "How do they make them round at the top?" asked Augustus. "They cut the blocks of stone so that they are smaller at one side of the stone to make it fit in."

"But how do they make it stay at the top?" asked Augustus again. "They put a larger stone at the very top. That is called a keystone. You always can tell a Roman arch by the keystone in the center and it is always round."

Beverly Nelson

The Colosseum in Ancient Rome

Mark Antony and Valerius went to the square where the Colosseum was being built about two thousand years ago. Valerius said to Mark Antony, "Look, how do they make those arches?" "First, they use square blocks, then they put in place wedged-shaped stones. Then in the middle they have a keystone. They have all these shaped blocks to hold up the round part of the arch." "They certainly are making many arches," said Mark Antony.

"Let's go and ask that man about how high it is going to be," said Valerius. They asked the Roman and he said, "It will be about the highest and largest building in Rome." After they looked at it for awhile Valerius said, "Won't the people of Rome be proud of this building?" "Yes," said Mark Antony. After they took one more good look they went home.

Jeanette Drouet

The Pantheon of Ancient Rome

Two thousand years ago in Rome Caesar and Cicero were going to watch the men build the Pantheon.

Caesar said, "Why is the roof shaped like the Greek temple roof?" Cicero said, "Because we copied from the Greeks." Caesar asked another question, "Why are they putting even number of pillars across the front?" Cicero said, "If they put an uneven number of pillars, one of the pillars would block up the doorway." Caesar said, "But couldn't people go around the pillar and go through the door?" Then Cicero said, "But if a pillar was there they wouldn't get any sunshine in the building."

Cicero looked up and said, "Look, there is a big dome on the Pantheon, but the front of the building still looks like a Greek temple." Then they started to walk around the building.

Frank Rivera

CONSUMERS' ENTERPRISES

I. Enjoying stories told by the teacher.

Gibson, Katherine. THE GOLDSMITH OF FLORENCE. The Macmillan Company, 1929.
  "Ghiberti and the Wonderful Doors."
  "The Boy of Rheims."
Haaren, John H. FAMOUS MEN OF GREECE. American Book Company, 1904.
  "Achilles."
  "The Adventures of Ulysses."
  "Pericles."
Lamprey, L. WONDER TALES OF ARCHITECTURE. Frederick A. Stokes Company, 1927.
  "The Wisdom of Athena."
  "A Holiday in the Forum."
  "A Night in the Red Palace."
Muller, Charles. HOW THEY CARRIED THE GOODS. Sears Publishing Company, 1932.
  "The Stone Pyramid."
  "The Roman Road."
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  "The Marathon Runner."

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"Hieroglyphica."
"How Our Alphabet Was Obtained."
BOBBS-MERRILL READERS, Book III. Bobbs-Merrill Company, 1924.
"A Little Roman Shepherd."
BOLENIUS READERS, Book VI. Houghton Mifflin Company, 1919.
"Clytie, the Heliotrope."
CHILD LIBRARY READERS, Book IV. Scott, Foresman & Company, 1924.
"The Gift of the Olive World."
CHILD LIBRARY READERS, Book VI. Scott, Foresman & Company, 1923.
"Pegasus, the Winged Horse."
CHILDREN'S CLASSICS IN DRAMATIC FORM, Book IV. Houghton Mifflin Company, 1928.
"Persephone."
CHILDREN'S OWN READERS, Book III. Ginn and Company, 1929.
"Androclus and the Lion."
CHILDREN'S OWN READERS, Book IV. Ginn and Company, 1929.
"The Adventures of Ulysses."
CHILDREN'S OWN READERS, Book VI. Ginn and Company, 1929.
"The Adventures of the Mason."
"Some Great Buildings of the World."
EASY ROAD TO READING, Book IV. Lyons and Carnahan, 1918.
"How Jason Lost His Sandal."
ELSON BASIC READERS, Book VI. Scott, Foresman & Company, 1931.
"The Spanish Bootblack."
FACT AND STORY READERS, Book V. American Book Company, 1931.
"In a Moorish Garden."
"The Olympic Games."
FACT AND STORY READERS, Book VI. American Book Company, 1931.
"The Chariot Race."
"The Invention of Printing."
THE FIELD FIFTH READER, READERS, Ginn and Company, 1925.
"A Greek Boy at the Olympic Games."
"A Roman Boy at Play."
FOR THE CHILDREN'S HOUR, Book III. Milton Bradley Company, 1918.
"The Boy Who Loved Justice."
"The Boy Who Wanted to Be a Sculptor."
LEARN TO STUDY, Book IV. Ginn and Company, 1926.
"A Great Musician."
THE MODERN SCHOOL READERS, Book III. Harr, Wagner and Company, 1924.
"The Painter's Slave."

THE MODERN SCHOOL READERS, Book IV. Harr, Wagner and Company, 1924.
"The Story of Ulysses."

PATHWAY TO READING, Book IV. Silver, Burdett & Company, 1926.
"Rosa Bonheur."

PATHWAY TO READING, Book VI. Silver, Burdett & Company, 1926.
"Interesting Words."

READERS—BOOK VI. Laurel Book Company, 1927.
"The Athenian Youth."
"The Pulling of the Sword."
"Stories of Early Rome."

READERS MASQUERADER AND OTHER STORIES. Ginn & Company, 1934.
"The Blue Stone of Faith."

SCOUTING THROUGH, John C. Winston Company, 1930.
"Grecian Baths."
"Roman Baths."

SILENT READERS, Book VI. John C. Winston Company, 1920.
"Saint George and the Dragon."

THOUGHT STUDY READERS, Book V. Lyons and Carnahan, 1930.
"Books of Yesterday."

THOUGHT STUDY READERS, Book VI. Lyons and Carnahan, 1930.
"Buried Cities of the Past."
"King Tut's Tomb."
"The Races of Man."
"Story of Glass."

TREASURE CHEST OF LITERATURE, Part I, Fifth Reader. Houghton Mifflin Company, 1929.
"The Story of Arachne."

WORK-PLAY READERS, Book V. The Macmillan Company, 1932.
"A Boy in Old Greece."
"Looking Back at Egypt."

WORK-PLAY READERS, Book VI. The Macmillan Company, 1932.
"Carrying the Mail."

III. Listening to victrola selections.

These interesting phonograph records gave the children an idea of the musical expressions of the different periods of architecture.

"Hymn to Apollo," third century B.C.	Victor 20896
"Greek Mountain Song"	Victor 20896
"The Fountains of Rome"	Victor 9126
"The Pines of the Appian Way"	Columbia 5311
"Entry of the Gladiators"	Victor 22438

"The Crusaders' Hymn," eleventh century	Victor 36089
"The Duke of Marlborough," used in the Crusade of 1096	Victor 20152
"The War Song of the Normans," Battle of Hastings	Victor 20152
"Ave Maria"	Victor 88484
"Gregorian Chants"	Victor 20897

IV. ENJOYING SONGS LEARNED BY THE CHILDREN.

- Songs of Egypt.
  - "Allah," FOLK AND ART SONGS, Book II.
  - "The Contented Camel," FOLK AND ART SONGS, Book II.
  - "A Trip to Egypt," INTERMEDIATE MUSIC.
  - "There's No Deity but God," ONE HUNDRED FOLK SONGS OF ALL NATIONS.
- Songs of Greece.
  - "Dream Music," FOLK AND ART SONGS, Book II.
  - "The Lost Song," FOLK AND ART SONGS, Book II.
  - "November," FOLK AND ART SONGS, Book II.
  - "The Olive Tree," FOLK AND ART SONGS, Book I.
- Middle Ages.
  - "The Crusaders," Music of Many Lands and Peoples.
  - "The Three Kings," Music of Many Lands and Peoples.
- The Renaissance.
  - "Hosanna," two-part chant, MUSIC OF MANY LANDS AND PEOPLES.
  - "Miserere," MUSIC OF MANY LANDS AND PEOPLES.
- Cathedral Music.
  - "The Vesper Hour," MUSIC OF MANY LANDS AND PEOPLES.
  - "Bells of St. Mary's," OCTAVO MUSIC.

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VI. An architect's experience shared with the group.

It was decided to invite an architect who could furnish some expert knowledge to come and talk to the children. These are some of the questions which were suggested by the children about which he might center his talk.

What does architecture mean to you?
How do you go about designing a building?
Were the first architects called architects?
Can anyone become an architect?
What did you have to do to become an architect?
How old does a person have to be before he can study to become an architect?
Did the Greeks make plans?
Why do architects make blueprints?
Will you show us how to make blueprints?
Have you used European architecture in your buildings?

The talk was most interesting. The children arranged their desks in one large circle. The architect sat with them and became one of their group. It was an informal discussion with many more questions asked by the children.

Great was their enthusiasm when this man who could create real buildings promised to come again and show them how to make blueprints (see "Producers' Enterprises").

● FIG. 91.—*Architecture Marches On—interest in the old leads to interest in today's architecture and even architecture of the future.*

ARCHITECTURE MARCHES ON

PROBLEM-SOLVING ENTERPRISES

I. CONCERNING THE TYPES OF ARCHITECTURE, CHARACTERISTICS AND FAMOUS EXAMPLES.

- A. Egyptian Architecture.
    - 1. Characteristics.
        - a. Slanting outer walls.
        - b. Bell-shaped pillars.
        - c. Lotus-bud designs.
        - d. Hieroglyphics.
        - e. Pillars on the inside of the temples.
        - f. Papyrus designs.
        - g. Limestone, sun-dried bricks.
    - 2. Famous examples.
        - a. Pyramids, Egypt.
        - b. Sphinx, Egypt.
        - c. Temple of Luxor, Egypt.
- B. Greek.
    - 1. Characteristics.
        - a. Pillars—Doric, Ionic, Corinthian.
        - b. Slightly sloping roof.
        - c. Square oblong floor plan.
        - d. Pillars on the outside.
        - e. Marble.
        - f. Slightly narrowed pillars at the top of the shaft.
    - 2. Famous examples.
        - a. Parthenon in Athens, Greece.
        - b. Erechtheum, in Athens.
        - c. Theseum, Athens.
- C. Roman.
    - 1. Characteristics.
        - a. Use of keystone.
        - b. Wedge-shaped stones.
        - c. Round buildings.
        - d. Domes.
        - e. Granite.

  - 2. Famous examples.
    - a. Triumphal arches in Rome.
    - b. Colosseum in Rome.
    - c. Pantheon in Rome.
    - d. Forum in Rome.
    - e. Acqueducts in Italy and in Spain.
- D. Byzantine.
  - 1. Characteristics.
    - a. Flattened domes.
    - b. Onion-shaped domes.
    - c. A large central dome surrounded by smaller domes.
    - d. Cross-shaped floor plan.
    - e. Small towers.
    - f. Mosaics on walls tell story of Christ.
    - g. Marbles, granite.
  - 2. Famous examples.
    - a. St. Mark's in Venice, Italy.
    - b. St. Sophia in Istanbul, Turkey.
- E. Romanesque.
  - 1. Characteristics.
    - a. Plain buildings.
    - b. Cross-shaped floor plan.
    - c. Towers with many arches.
    - d. Rose windows.
    - e. Thick walls.
    - f. Copied from Byzantine and Roman architecture.
    - g. Tell story of Christ in fresco.
  - 2. Famous examples.
    - a. Cathedral at Pisa, Italy.
    - b. San Ambrogio, Milan, Italy.
- F. Gothic.
  - 1. Characteristics.
    - a. Tall spires.
    - b. Stained-glass windows.

        - c. Many windows.
        - d. Rose windows.
        - e. Gargoyles.
        - f. Flying buttresses.
        - g. Cross-shaped floor plan.
        - h. Story of Christ on the windows.
        - i. Steep roof.
    - 2. Famous examples.
        - a. Cologne Cathedral, Cologne, Germany.
        - b. Notre Dame Cathedral, Paris, France.
        - c. Milan Cathedral, Italy.
- G. Renaissance.
    - 1. Characteristics.
        - a. Rebirth of Greek and Roman architecture.
        - b. Heavy corners with statues.
        - c. Simple outline.
        - d. Very tall pillars.
        - e. Fancy carvings.
        - f. Richly decorated interiors.
        - g. Flat roofs.
    - 2. Famous examples.
        - a. Florence Cathedral, Florence, Italy.
        - b. St. Peter's, Rome, Italy.
        - c. St. Paul's, London, England.
- H. Today.
    - 1. Characteristics.
        - a. Setbacks.
        - b. Simple outline.
        - c. Plain buildings.
        - d. Tall buildings.
        - e. Copied from all styles.
        - f. Many windows.
    - 2. Examples.
        - a. Skyscrapers.
        - b. Empire State Building, New York.
        - c. Office buildings in large cities.

- I. Tomorrow.
    - 1. Characteristics.
        - a. Steel frames.
        - b. No pillars.
        - c. Square buildings.
        - d. Setbacks.
        - e. Fireproof.
        - f. Flat roof.
        - g. Bright colors.
        - h. Glass walls.
        - i. Artificial sunlight.
        - j. Factory-built.
        - k. Use of steel, concrete, glass, brick.
        - l. Air-conditioned.
    - 2. Examples.
        - a. Buildings at Chicago's Fair.

II. CHILDREN'S QUESTIONS ON TYPES OF ARCHITECTURE.

A. Egyptian architecture.

For what were the pyramids built?
For which king was the Great Pyramid built?
Is the Sphinx a picture of any certain person?
What name do we give to Egyptian picture writing?
Were all the ancient Egyptians able to read their picture writing?
What was an obelisk?
Why was it carved?
Was an obelisk made of one piece of material?
What building material did the Egyptians use most?
How could they keep the sand out of their temples?
How many chief gods did the Egyptians have?
Could people in other places read the picture writing?
Where did the Egyptians get their building material?
How did they transport their building material?
How was the building material cut into such huge blocks of stone?

B. Greek architecture.

How would you know a Greek building?
Were the Greeks the first people to use pillars?
Were the Greeks the first people who built temples?
Are all the temples still standing?
Were there many temples?
Why were the temples built?
Were their homes built like their temples?
What was in the temples?
Did the Greeks have public buildings like ours?
Did other people in Europe build temples like those of the Greeks?
Were the columns built of one long piece of marble?
Were there different kinds of marble?
Why do architects consider the Parthenon the most perfect building ever built?
Did the Greeks sell marble to other countries?
Did all Greek temples have the same number of columns as the Parthenon?
Why did the Parthenon have an uneven number of pillars across each end?
Did the Greeks ever use more than one kind of column on a building?
Were children allowed to enter the temples?
Were the temples always open?
How were the temples lighted?
Were the roofs made of marble also?

C. Roman architecture.

Where was Roman architecture used?
How did the arch develop?
What was a triumphal arch?
What was an aqueduct?
How did the water get into the aqueduct?
Where did we get the word aqueduct?
What is the Pantheon?
Has the Pantheon any windows?

Where did the Romans get the stones to make the archways?
To what uses were the Roman arches put?
What style of architecture is the Pantheon?
What was inside the Pantheon?
How did the Romans happen to build the aqueducts?
Are the aqueducts still used?
Who is the man who invented the Roman arch?
Why was the keystone necessary?
In what kind of palaces did the rulers live?
What kind of religion did the Romans have?
Why are Roman arches so famous?
Are there any famous buildings of Roman architecture?
What are the names of the famous buildings?
Where are they?
Did the Romans copy any other type of architecture?
Does Roman architecture have pillars?
Does Roman architecture have spires?
Does Roman architecture have pinnacles?
Does Roman architecture have domes?
What kind of decorations did the buildings have?

D. Byzantine architecture.

How were the domes made?
Where did the word Byzantine originate?
What kind of archways did they have on their buildings?
What colors did they use?
How did they make their colors?
How long did it take to carve a pillar with leaf forms?
What are the names of the famous Byzantine buildings?
Who built the first famous Byzantine building?
How would you know a Byzantine building?
Was Byzantine architecture copied from other types?
Were these domes like the Roman domes?
Was Byzantine architecture used for anything besides churches?

Did any other types of architecture copy the Byzantine type?
Were Greek or Roman pillars used in these buildings?
How did they happen to start making windows?
Was Byzantine architecture as graceful as Greek architecture?

E. Romanesque architecture.

Where did Romanesque architecture get its start?
How can you tell if a building is Romanesque architecture?
Did the Romanesque builders build only churches?
What was the floor plan of a Romanesque church?
Did a Romanesque building have more than one dome?
What was the difference between these domes and the Byzantine domes?
Who was responsible for the first Romanesque famous building?
What does the word Romanesque mean?
Why didn't these builders copy Greek architecture instead of Roman?
Why did Romanesque builders decide to have rose windows?
Did rose windows tell the story of Christ?
Were there any famous sculptors during this period?

F. Gothic architecture.

What is a cathedral?
What is a rose window?
Do Gothic cathedrals have any other kinds of windows besides rose windows?
How are cathedrals lighted?
Are there pillars in a cathedral?
What kinds of ornaments were used?
Does only the bishop use his chair in the cathedral?
Of what are cathedrals built?
Why are there so many towers?
What kinds of architecture were used by cathedrals?

Do cathedrals have carpets or rugs?
Out of what did they make the paint?
Were there organs in the cathedrals long ago?
What kinds of decoration do they have inside?
What are some of the names of the famous cathedrals?
Where are the cathedrals located that are famous?
Why are they still famous?
Of what religions were cathedrals?
Where was the first cathedral built?
Are cathedrals still being built?
Who was the first person who got the idea of building a cathedral?
How would you know a cathedral if you saw one?
Why are there an uneven number of steps in cathedrals?
Why do cathedrals have flying buttresses?
Is there more than one kind of pointed arch?
Why are stained-glass windows so high up?
What does the word cathedral mean?

G. Renaissance architecture.

How would you know a Renaissance building when you saw one?
Did the Renaissance builders use marble?
Why didn't the Renaissance builders like Gothic architecture?
Did the Renaissance builders copy other types of architecture?
Were Renaissance cathedrals still built in the shape of a cross?
Were there any famous sculptors during this period?
What other famous buildings besides cathedrals did Renaissance builders build?
How could the Crusades be a reason for the Renaissance architecture?
What does the word Renaissance mean?
Did these builders have steep roofs like the Gothic? If not, why not?

III. CONCERNING FAMOUS BUILDINGS OF EUROPE.

A. Suggested outline for seeking information:

What is the name of the building?
Who built it?
Where was it built?
Why was it built?
When was it built?
What type of architecture is it?
Is it still there?

B. Some of the famous buildings of Europe.

LEANING TOWER OF PISA

It is in Pisa, a city in Italy.
It leans over 16 feet.
It began to lean when the foundation began to sink long ago.
It is eight stories high—181 feet.
It was built as a bell tower.
There are seven bells on the platform at the top.
There are many small arches going round and round the tower.
It is Romanesque architecture.

SAINT SOPHIA

It is in Istanbul, in Turkey.
It was built about sixteen hundred years ago.
It is Byzantine architecture.
It was one of the first churches built in the Christian religion.
It was beautifully decorated with pictures and mosaics.
When the Mohammedans made it into a mosque, they covered the mosaics with paint.
It was built by a Roman ruler, Justinian.

THE TOWER OF LONDON

It is in London, England.
It was built by William, the Conqueror, who was an English king.
It was built to protect London.
It covers 18 acres.
It has been used as a royal palace, fortress and as a prison.
Many prisoners have been beheaded here.

The crowns and the jewels of the kings and queens of England are kept here.

SAINT MARK'S

It is in Venice, Italy.
It is Byzantine architecture.
Over the main entrance are four bronze horses which have been taken to many places but were returned.
It is also called San Marco.
It has pictures of colored stones called mosaics both inside and outside.
All the parts needed were brought by boat by Venetian merchants.
It has onion-shaped domes.

COLOGNE CATHEDRAL

It is in Cologne, Germany.
It is near the Rhine River.
It took seven hundred years to build it.
It was finished about sixty years ago.
It was started by an archbishop of Cologne who had plenty of money and who decided to build the most beautiful cathedral in the world.
It is Gothic architecture.

EIFFEL TOWER

It is the tallest tower in the world.
It is in Paris, France.
It is about one thousand feet high.
It is made of iron.
It stands on four tall iron legs.
It has elevators going to the top.
It was built one hundred years ago.
It is used as a scientific observation and as a radio tower.
The electric light on the top can be seen thirty miles away.

NOTRE DAME CATHEDRAL

It is in Paris, France.
It is on a small island in the Seine River.
It was built for a church.
It is Gothic architecture.
It has beautiful rose windows.
It is built of stone and stained glass.

It has two towers in front and a tall spire in the center.
Flying buttresses hold up the roof.
There are strange animals made of stone on the edge of the roof. These are gargoyles. They frighten away evil spirits.

WESTMINSTER ABBEY

It is in London, England.
It is Gothic architecture.
It has beautiful rose windows.
It was built to be the church of a bishop.
It is also a tomb for famous people—kings, queens, writers, poets, musicians, famous soldiers.
The King of England is crowned here.

THE ALHAMBRA

It is in Granada, in Spain.
It was built for a fortress and a home for the Moorish kings.
It was built about seven hundred years ago.
It is Moorish architecture.
It was built by the Moors.
It has very beautiful courtyards.
It has a tile roof, Moorish archways and arabesques.

THE COLOSSEUM

It was built in Rome.
It was used for the entertainments for the Roman people and rulers.
It was built in 80 A.D.
Titus was one of the builders.
It was one of the first round buildings.
It has 78,000 seats.
It covers 6 acres.
Only one-third is still standing.
It has Ionic, Doric and Corinthian pillars.
It is Roman architecture.

THE PARTHENON

It is in Athens, Greece.
Phidias and his helpers finished it in 438 B.C.
Parts of it are still standing.

It is Greek architecture.
It was built in honor of Athena.
It was used as a temple.
It has eight Doric pillars at each end and seventeen at the sides.
It took ten years to build it.

THE PANTHEON

It is in Rome.
It is Roman architecture.
It is still standing.
It was built in 27 A.D.
It was built when Agrippa was the ruler of Rome.
It was one of the first buildings that had a dome.
It was the home of all the gods and goddesses of the Romans.

ARCH OF TITUS

It is in Rome.
It was built by the Emperor Domitian in the year 81.
It was built to celebrate the capture of Jerusalem by Titus.
It stands in the Sacred Way facing the Forum.
The inner side of the arch is decorated with reliefs showing the exploits of Titus.

IV. CONCERNING EXACT MEASUREMENTS OF FAMOUS BUILDINGS.

A. The Great Pyramid at Gizeh.
    Base—755 feet long.
    Height—481 feet.
    Vertical height—451 feet.
    Opening to the tomb—55 feet above ground.
    Weight of some of the blocks of stone—50 tons.
    Covers—13 acres.
B. The Parthenon.
    Length—288 feet.
    Width—100 feet.
    Height—60 feet.
    Height of pillars—35 feet.
    Number of pillars around the building—48.
C. The Pantheon.
    Width across the stone roof—144 feet.

Height of roof above the ground—140 feet.
Width of circular opening—28 feet.

D. St. Mark's.
- Length from east to west—250 feet.
- Greatest width—170 feet.
- Diameter of largest dome—42 feet.

E. Cologne Cathedral.
- Height of towers—512 feet.
- Length—44 feet.
- Greatest width—300 feet.

F. Sources of Information.
- BOOK OF KNOWLEDGE.
- WORLD BOOK.

V. Excursions.

A. Locating the Greek orders.

The first excursion was made to give the children an opportunity for some real experiencing. The teacher had made a previous survey of buildings with the most pronounced types of Greek pillars. There were several good examples within walking distance. This excursion was a valuable one for it was an outgrowth of regular class work (see "Narrative Account—Launching the Unit"), and it served as a stimulating agency for future study.

In order to make the excursion a profitable and effective one, the teacher had to plan definitely how to secure the results she wished. In order to direct the observations of the children, pictures of the Greek pillars were placed about the room. The group already familiar with them led the discussion. Simple outline drawings of the Greek orders were drawn on the board. A brief outline of characteristics to be observed was also presented. Each pupil made his own copy for reference during the excursion.

The buildings visited had very large pillars. The children were amazed at the size. They stood by them, gazed up at them and tried to reach around them. At one building it was necessary for three children to join hands to form a circle around a pillar. At another place the grooves were so deep that a child's arm could not fill the space.

There was a follow-up discussion as soon as the class returned to school. Those who had made sketches presented them to the class and explained them. The lists that had been made were compared and faulty observations corrected.

The comments made and questions raised paved the way for further study and for further excursions.

B. Locating the types of architecture in the community.

There were two other excursions made. A number of buildings were within walking distance which illustrated all the various types of architecture to be studied except the Egyptian.

The group of buildings of the Egyptian type was at some distance, although within the city limits. The boys who had bicycles used that means of conveyance. One mother who was not working and several of the teacher's friends assisted the teacher in transporting the children in automobiles.

The children had by this time acquired the necessary background to make this a profitable and enjoyable experience. Their knowledge of the various types of architecture enabled them to interpret and understand the values found in these particular buildings.

It was their task on these two excursions (1) to classify architecturally the places visited, (2) to observe the floor plan, (3) to notice the doorways, windows, decorations and (4) try to determine which famous building in Europe, if any, it most closely resembled.

The children made booklets with several pages reserved for each type of architecture. Here they were to list their findings. The pages reserved for the Egyptian architecture were used on the next excursion.

During the follow-up, comments made were used for the last scene of the culmination. Some of the written reports were sent to the school newspaper. Great was the interest shown in an art lesson on floating water colors when they were told that this was the beginning of several lessons for making stained-glass windows such as were seen in one of the churches visited.

These excursions opened up entirely new fields to the children. In all but one or two cases, none of the children had ever been to the points visited. It was a treat to see the excitement that prevailed and the real interest shown.

SOME OF THE SPECIFIC-LEARNING ENTERPRISES

Learning to recognize different styles of architecture.
Practice in making and taking constructive criticism.
Practice in making oral reports.
Practice in organization of research material.
Practice in using dictionaries, indexes and reference material.
Drilling upon map locations.
Using the ruler in measuring.
Drawing to scale.
Making building plans.
Cutting designs and letters freehand.
Practice in story writing.
Some skill in map making.
Costume designing and making.
Learning to spell words needed in record keeping.
Improving sentence structure and paragraphing.
Making molds and modeling clay.
Making block prints.
Practice in handling water colors.
Practice in interpreting music.
Practice in singing interpretive songs.
Memorizing 2 songs—
  "Bells of St. Mary's."
  "The Vesper Hour."

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Asbjornsen, Peter Christen. FAIRY TALES FROM THE FAR NORTH. A. L. Burt Company, Inc., New York, 1897. Typical Norwegian folk tales.

Beuret, G. WHEN I WAS A GIRL IN FRANCE. Lothrop, Lee & Shepard Company, Boston, 1925. Few photographic illustrations.

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Bryant, Mrs. Lorinda. THE CHILDREN'S BOOK OF EUROPEAN LANDMARKS. Appleton-Century Company, New York, 1928. Real illustrations of famous places in Europe; a story accompanies every picture.

Carpenter, F. G. AROUND THE WORLD WITH THE CHILDREN. American Book Company, New York, 1924. Many prints and some colored illustrations. Introduction to study of geography; chapters on Switzerland, Germany, Holland; good factual reading.

Carpenter, Frances. OUR LITTLE FRIENDS OF THE NETHERLANDS, DICK AND DIENTJE. American Book Company, New York, 1935. Colored illustrative material; simple literature; glossary of dutch words and names.

Clement, M. ONCE IN FRANCE. Doubleday, Doran & Company, Inc., Garden City, N. Y., 1930. Black and white illustrations. Good recreational reading.

Cole, Walter. A. B. C. BOOK OF PEOPLE. Mirton, Balch & Company, New York, 1932. Full-page illustrations of different peoples. Short descriptions of simple nature.

Crommelin, Emmeline G. FAMOUS LEGENDS. Century Company, New York, 1928. Legends of Spain, Ireland, Scandinavia, Switzerland, Germany. Small print, but worth-while material.

Dorey, Jacques. THREE AND THE MOON. Alfred A. Knopf, Inc., New York, 1929. Illustrated by Artzybasheff—modernistic. Legends of Brittany, Normandy, Provence; quaint and readable.

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Evans, Mark. COSTUMES THROUGH THE AGES. J. B. Lippincott Company, Philadelphia, 1930. National costumes.

Finnemore, John. PEEPS AT MANY LANDS, FRANCE. A. & C. Black, London, 1909. Few colored illustrations; good costumes; to be used for reference, small print.

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French, Allen. THE STORY OF FOLF. Little, Brown & Company, Boston, 1932. Illustrated by Henry Pitz—colored; large print. Very good recreational reading.

Griffis, W. E. YOUNG PEOPLE'S HISTORY OF HOLLAND. Houghton Mifflin Company, Boston, 1894. Illustrated with paintings, etc. Good factual material for reference.

Grover, Eulalie Osgood. THE OVERALL BOYS IN SWITZERLAND. Rand, McNally & Company, Chicago, 1916. Illustrated by B. C. Melcher in simple typical colored sketches. Easy and interesting reading; good background of Swiss daily life.

Guerber, H. A. LEGENDS OF THE RHINE. A. S. Barnes & Company, New York, 1905. Black and white illustrations for costumes and buildings. Adult reading.

Haire, Frances Hamilton. THE FOLK COSTUME BOOK. A. S. Barnes & Company, New York, 1926. Pictures in color and practical descriptions of peasant costumes from 22 countries.

Hall, A. W. ICELANDIC FAIRY TALES. A. L. Burt Company, Inc., New York. Illustrated by E. A. Mason. Good recreative reading at the children's level.

Hamsun, Marie (Mrs. Knut). A NORWEGIAN FARM. J. B. Lippincott Company, Philadelphia, 1933. Illustrated by Elsa Jemne; charming illustrations in black and white. Story of children in Norway, showing their lives in the summer and winter.

Headley, Edna A. HOW OTHER PEOPLE TRAVEL. Rand, McNally & Company, Chicago, 1926. Illustrated with photographs; large print, simple reading, factual material.

Jordon, Charlotte B. DISCOVERING CHRISTOPHER COLUMBUS. The Macmillan Company, New York, 1932. Photographic illustrations of documents collected by author.

Kiner, Grace. CHILDREN OF HOLLAND. Follett Publishing Company, 1930. Good illustrations. Interesting treatment of life and background of Dutch.

Lagerlof, Selma. THE WONDERFUL ADVENTURES OF NILS. Doubleday, Doran & Company, Inc., Garden City, N. Y., 1907. Scant illustrations, but good. Judged as one of the best books ever written by Selma Lagerlof for children.

Lang, Andrew. THE STORY OF JOAN OF ARC. Children's Hero Series. E. P. Dutton & Company, Inc., New York, 1906. Small print. Simple story, good for recreative reading.

Leetch, Dorothy Lyman. ANNETJE AND HER FAMILY. Lothrop, Lee & Shepard Company, Boston, 1926. Illustrated by L. J. Bridgman in black and white. Adventures of a little girl in New Amsterdam.

McManus, Blanche. OUR LITTLE DUTCH COUSIN. Doubleday, Page & Company, 1906. Illustrated by author in black and white. Easy recreative reading; lively story.

McManus, Blanche. OUR LITTLE FRENCH COUSIN. Doubleday, Page & Company, 1905. Illustrated by the author in black and white; large print. Interesting story.

Mackler, A. F. PEEPS AT MANY LANDS, NORWAY. A. & C. Black, London, 1909. Illustrated by A. H. Cooper and Jungmann. Good material on customs, etc.; good reference reading.

Martineau, Harriett. FEATS ON THE FJORDS: Tales for Children from Many Lands. Illustrated by A. Rackham, colored. The Macmillan Company, New York, 1924. Small print. Stories of daily life.

Methley, A. A. HAPPY HOMES IN FOREIGN LANDS. Frederick A. Stokes Company, New York, 1922. Illustrations in black and white giving good material on homes, costumes, etc. Chapter on Europe.

Miller, O. B. NURSERY FRIENDS FROM FRANCE. Book House for Children, Chicago, 1927. Colored illustrations. Attractive book of poems and songs.

Mulets, L. E. SUNSHINE LANDS OF EUROPE. World Book Company, Yonkers-on-Hudson, N. Y., 1930. Pencil sketches. Children of Portugal, Spain, France; easy and interesting reading giving good background on daily life.

Neumann, Daisy. SPERLI, THE CLOCKMAKER. The Macmillan Company, New York, 1932. Illustrated by E. T. Thompson; costumes in color also black and white. Good print, fine reading.

Neumann, Daisy. TIMOTHY TRAVELS. Coward-McCann, Inc., New York, 1928.

Nixon, R. OUR LITTLE SPANISH COUSIN. Doubleday, Page & Company, 1906. Few illustrations. Good data on everyday life; simple reading.

Olcott, F. J. WONDER TALES FROM WINDMILL LANDS. Longmans, Green & Company, New York, 1926. Illustrations by Herman Roese, sketches in black and white; large print. Simple individual stories; easy reading.

Olcott, V. ANTON AND TRINI. Silver, Burdett & Company, New York, 1930. Many illustrations by Constance Whettemore, very colorful; small, clear print. Interesting and lively story for intermediate grades.

JEAN AND FANCHON, 1931, French.
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Peck, A. M. STORYBOOK EUROPE. Harper & Brothers, New York, 1929. Pen and ink drawings. Adult reading.

Perdue, H. A. CHILD LIFE IN OTHER LANDS. Rand, McNally & Company, Chicago, 1918. Photographs; good print. Chapters on Norway, Holland, Germany; factual material.

Petersham, Maud, and Miska Petersham. THE STORY BOOK OF HOUSES. John C. Winston Company, Philadelphia, 1933. Interesting and unusual color illustrations; large print. Authentic material.

Piepir. CHILDREN OF OTHER LANDS. The Platt & Munk Company, New York, 1929–1933. Very good illustrations, black, white, colored. Good descriptions; reference reading.

Sadlier, Agnes. HISTORY OF IRELAND. A. L. Burt Company, Inc., New York, 1898. Illustrated in black and white. Large print—in words of one syllable. Good reference material, but old.

Sawyer, R. TONO ANTONIO. Viking Press, Inc., New York, 1934. Illustrations in black and white. Small print but good recreative reading.

Scott, G. KARI. Doubleday, Doran & Company, Inc., Garden City, N. Y., 1932. Illustrated with simple sketches. Good entertaining material on Norwegian habits and customs.

Sidgwick, Mrs. Alfred. PEEPS AT MANY LANDS, GERMANY. A. & C. Black, London, 1909. Colored illustrations; small print. Factual reading.

Smith, Mary E. HOLLAND STORIES. Rand McNally & Company, Chicago, 1913. Colored illustrations. Simple story with appeal for children.

Smith, Susan. MADE IN FRANCE. Alfred A. Knopf, Inc., New York, 1931. Pen and ink sketches. Describes the materials made in France.

Sherwood, Merrian. THE TALE OF THE WARRIOR LORD. Illustrated by H. Pitz, block prints. Longmans, Green & Company, New York, 1930. Legend of the Cid. Good for dramatization or oral reading.

Siebe, Josephine. KASPERLE'S ADVENTURES. The Macmillan Company, New York, 1929. Illustrated by Frank Dobias; colored illustrations are exceptionally good with strong appeal for children. Kasperle is a wooden doll.

Spyri. EVELI. J. B. Lippincott Company, Philadelphia, 1926. Interesting and simple story, giving customs, habits, etc., of daily life.

Spyri. LITTLE ALPINE MUSICIAN. Thomas Y. Crowell Company, New York, 1924.

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Stein, Evaleen. OUR LITTLE FRANKISH COUSIN OF LONG AGO. L. C. Page & Company, Illustrated by Landau and Meister in black and white; clear print. Story of court of Charlemagne.

Stephens, James. IRISH FAIRY TALES. The Macmillan Company, New York, 1934. There are no illustrations; large clear print. Good reading for recreation.

Stratton, Clarence. PAUL OF FRANCE. The Macmillan Company, New York, 1927. Illustrated by E. Rape and boldly colored. Advanced recreative reading.

Stuart, Dorothy Margaret. YOUNG FOLK'S BOOK OF OTHER LANDS. Little, Brown & Company, Boston, 1927.

Thorsmark, Thora. IN WOODEN SHOE LAND. Row, Peterson & Company, Evanston, Ill., 1929. Illustrated by H. H. Below with lively pictures. Simple recreative reading giving customs, etc.

Wade, Mary Hazel. OUR LITTLE IRISH COUSIN. Doubleday, Page & Company 1904. Illustrated by Gridgman in black and white. Simple but active story.

Washburne, H. C. LETTERS TO CHANNY. Junior Literary Guild, Rand, McNally & Company, Chicago, 1932. Illustrated by E. Papadopoulas; small print, interestingly arranged. Letters of trip around the world from mother to son.

Williams, Margery. PEEPS AT GREAT CITIES, PARIS. A. & C. Black, London, 1910. Colored illustrations. Factual reading.

Wilson, T. B. NORWAY AT HOME. George Newnes, Ltd. Descriptions in photographs. Tells of life and customs.

Perkins, Lucy Fitch. THE IRISH TWINS, 1913.
THE FRENCH TWINS, 1930.
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THE SWISS TWINS, 1922.
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Houghton Mifflin Company

Excellent illustrative material (sketches) depicting life of peoples. Simple reading in story form.

Remedial Reading Material

1. Work-type readers with lessons according to specific training functions:

Horn, Ernest and Maude McBroom. LEARN TO STUDY READERS, Books III, IV, V. Ginn & Company, Boston, 1924.

Lewis, William D. and Albert L. Rowland. NEW SILENT READERS. Books IV, V, VI. John Winston Company, Philadelphia, 1927.

Stone, Clarence R. SILENT READING. Books III, IV, V. Houghton Mifflin Company, Boston, 1925.

Spencer, Paul R. and others. THOUGHT STUDY READERS, Books IV, V, VI. Lyons and Carnahan, 1929.

2. Practice booklets:

McCall, William and Lelah Mae Crabbs. STANDARD TEST LESSONS IN READING. Bureau of Publications Teachers College, Columbia University, 1928.
  Type A—General Significance.
  Type B—Predict Outcome.
  Type C—Understand Directions.
  Type D—Details.
Gates, Arthur I, and Peardon. CELESTE COMEGYS. PRACTICE EXERCISES IN READING. Bureau of Publications, Teachers College, Columbia University, 1933.

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